

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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LONDON, SATURDAY, JULY 10, 1847.

[PRICE 6D.]

FOREST OF DEAN, GLOUCESTERSHIRE.

BLAST-FURNACE AND COLLIERIES.—TO BE SOLD, BY AUCTION, by Mr. WHITE, at the Bell Inn, in the city of Gloucester, on Tuesday, the 18th day of July, 1847, at Three o'clock in the afternoon punctually, in one lot, the newly-erected and valuable **BLAST-FURNACE**, for the smelting of iron, called

DARK-HILL FURNACE,

with the **ENGINES, MACHINERY**, apparatus, hot-blast stove, casting-house, carpenter's shop, and blacksmith's shop, and other buildings, coke-yard, furnace-yard, water pond, reservoir, lands and appurtenances thereto belonging and adjoining, the site whereof comprises, in the whole, 5a. 3a. 17r., or thereabouts, situated within a few yards of the Severn and Wye Railway, and of the turnpike-road leading from Coleford to Park End and Blackney, in the township of West Dean, in the Forest of Dean. Also, the two very valuable **COAL MINES, GALES, or LEVELS**, at **COAL**, called

DARK HILL AND SHUTCASTLE COLLIERIES, adjoining each other, situated in the said township of West Dean, with the buildings, coke-yards, tram-roads, and other matters and things used in working the same collieries, and now being in, upon, or under the name of **THE COLLIERIES** comprising the coal under about 180 acres of land, and are estimated to contain 6000 tons per acre of the Colored High Delf Coal in a vein of 6 feet thickness. The mouth of the Dark-hill level lies within 50 yards of the Severn and Wye Railway, and within about 200 yards of the furnace.

The blast-furnace is capable of making from 50 to 70 tons per week of pig-iron, which can be manufactured and delivered at the shipping port of Lydney, at a cost, including every expense, not exceeding 55s. per ton.

The **DARK-HILL COLLIERIES** are subject to a yearly rent or royalty of three half-pence for every ton of coal brought out, payable to the crown half-yearly; and if such rent shall not amount within any year to £2, then a rent of £2 in lieu thereof.

The **SHUTCASTLE COLLIERIES** are subject to a yearly rent or royalty of one penny for every ton of coal brought out, also payable to the crown half-yearly; and if such rent shall not amount within any year to £2, then a rent of £2 in lieu thereof.

Two undivided third parts or shares in the blast-furnace, and lands, and collieries are freehold of inheritance. The other one undivided third part is held by lease for the remainder of a term of 21 years (except the last three days of the said term), commencing on the 1st day of January, 1848, and is subject to the payment, to the proprietor of such one-third part, of 3s. 4d. for every ton of pig-iron made upon the premises, and three-pence for every ton of saleable coal raised or gotten out of the premises, other than and except the coal fairly raised for household purposes by workmen employed in the said mines and works, and other than and except any coal consumed in the making or manufacturing iron upon the said premises; but if the said rent of 3s. 4d. per ton of pig-iron shall not amount in any half-year to £100, then the sum of £100 is to be paid in lieu thereof for each half-year.

An abundant supply of excellent **IRON MINE** can be obtained at a price ranging from 5s. to 7s. per ton, delivered at the furnace-yard; and fire-bricks are made in a brick-yard adjoining the property.

Further particulars and information respecting the property, may be obtained of B. Muesel, Esq., Coleford, Gloucestershire; or of Messrs. Fowles, Tyler, and Fowles, solicitors, Monmouth.

VALUABLE MINING SETT AND MATERIALS.

MR. E. RENDEL has received instructions to **OFFER FOR SALE, BY PUBLIC AUCTION**, on Monday, the 19th day of July inst., by two o'clock in the afternoon precisely, at the Account-house, on the mine, the **RESIDUE OF SEVEN OF TWENTY-ONE TRAILS**, of which 14 are unworked, the **SETT**, or **GRANT**, **TO KIDDE AT WHEEL MARY**, in the parish of **CALSTOCK, CORNWALL**.

Also, the under-mentioned **MINING MATERIALS**, which are nearly new, consisting of a **WATER-WHEEL**, 3 feet breast, with the wheel, belt, balance and condensing wall complete; capstan and chaps, pumps, rods, ladders, kibbles, pulleys, stands, and other requisites necessary for working the mine—the same being now fixed, and in a proper position for proving the same; together with smith's bellows, anvil, vice, screw stock, weights, beam and scales, smith's tools, a lot of iron, of different sorts, steel, carpenter's bench, timber, wheelbarrows, grinding-stone and frame, barrels, chests, 14 dozen of shovels, &c.—The present shareholders have thought it advisable to offer the above for sale, in one lot, in the situation in which it is now fixed.

The mine and materials now offered may be viewed, on application at the mine, any day in the week preceding the day of sale; and any further particulars may be obtained on application to the auctioneer; or Mr. Small, solicitor, Callington.

Callington, July 3, 1847.

FOR THE BENEFIT OF THE UNDERWRITERS, AND FOR THE PAYMENT OF SALVAGE CHARGES.

MR. W. D. MATHEWS, AUCTIONEER, begs to inform the public, that, on Monday, Tuesday, and Thursday, the 26th, 27th, and 29th day of July inst., at ST. IVES, PENZANCE, and SCILLY, PUBLIC SALES, BY AUCTION, will take place, for **SALVAGE**, without reserve, nearly **FIVE HUNDRED PIECES** of very

SUPERIOR SPANISH MAHOGANY, containing about 40,000 feet, being part of the cargo of the French brig *Sole de Blackbird*, wrecked near the Land's End, in December last, on a voyage from St. Domingo, direct for Havre, when all hands, unfortunately, perished.

This sale is strongly recommended to the notice of the public. Many of the logs will produce splendid curio—others the finest description of strong shaded wood.

The pieces vary in contents from 10 to 200 feet each, and come generally under the denomination of "Yepser Logs."

The sale at ST. IVES will take place on MONDAY, the 26th, at Ten o'clock in the forenoon, for **SELLING** about **TWO HUNDRED AND EIGHTY PIECES** of the same.

At PENZANCE, on the following day, at noon, for **SELLING** about **EIGHTY PIECES**; and at the last, at ST. MARY'S, SCILLY, on THURSDAY, the 29th of July, for **SELLING** the remainder, consisting of about **ONE HUNDRED AND THIRTY PIECES**.

The whole will be put up in such lots as may suit the convenience of the purchasers.

For viewing the same, application may be made to the several "Receivers of Droits," in whose custody the goods are at Penzance, St. Ives, and Scilly; and for further particulars, to the auctioneer; or to

RICHARD PEARCE, French Consular Agent, Penzance.

N.B.—The *Cornwall* steamer will leave Bristol on Friday, the 23d inst., at One o'clock in the afternoon, and arrive at St. Ives about Six o'clock the following morning. The *St. Francis* steamer leaves Plymouth every Saturday at noon. The *Lioness* packet leaves Penzance, for Scilly, at Nine o'clock every Wednesday morning; and Scilly, for Penzance, the same hour every Friday.

TO BE SOLD, BY PRIVATE CONTRACT, at GODOLPHIN MINES, ONE 36-INCH PUMPING-ENGINE, 6 feet stroke, equal beam, boiler, 8 tons, balance-bob, and first piece of rod.

ONE 24-INCH **STAMPING-ENGINE**, 6 feet stroke, boiler, 11 tons.

ONE 24-INCH **WHIM-ENGINE**, 6 feet stroke, boiler, 4 tons, and cage.

ONE 18-INCH **WHIM-ENGINE**, 4 feet stroke, boiler, 7 tons, and cage.

SIX **TUBULAR BOILERS**, 11 tons each.

A large **IRON BALANCE-BOB**, 12 tons.

Application to be made to Capt. H. Williams, on the mines.

Dated Godolphin Mines, Helston, Cornwall, May 27, 1847.

BLAST-ENGINES.—TO BE SOLD, a very powerful condensing **BLAST-ENGINE**, with a 54-inch steam cylinder, and 108-inch blowing cylinder, working 5 feet stroke. It is in a good state of repair, the greater part having been new within the last seven years. Also, a strong **CAST-IRON BEAM**, 27 feet long, and weight about 13 tons. Also, a 60-inch and a 97-inch **STEAM-CYLINDER**, to work 4 feet stroke. For price, and further particulars, apply by letter, 104 Box, Post-office, Wolverhampton.

TO CAPITALISTS.—CARMARTHENSHIRE AND GLAMORGANSHIRE, SOUTH WALES.—THE AGENT of an extensive estate calls the attention of Ironmasters, Colliers, Manufacturers, Farmers, and Capitalists in general, to this announcement—he is prepared to ENTER INTO ARRANGEMENTS with respectable PARTIES for the LEASING, on long terms, of **VARIOUS DESCRIPTIONS OF PROPERTY**, now the object of public attention—Anthracite and Bituminous Coal and Guano, Ironstone, Limestone, Marble, Flax, and other quarries—Fire Clay and Brick Earth, Land for erecting a mill, and near flourishing and fast-growing commercial town, sea-port, and floating dock, manufactories, shipbuilding yards, wharves, stores and dwelling houses; and, in the coal and iron districts, **SITES FOR WORKS**, joining a railway and canal, leading, by their main trunks and branches, to three seaports—water-power is almost general.—SITUATIONS for **RURAL AND MARINE RESIDENCES** in the most beautiful parts of the country, commanding views of Swansea and Carmarthen Bays, and the Black Mountains, with good roads, cheap markets, and daily communication with Bristol, Gloucester, and the metropolis.

The estate is situated in 34 parishes, offering, in every variety of soil and scenery, numerous objects of interest to the geologist, the sportsman, and the admirer of the picturesque. As an inducement to capitalists to embark in such agricultural improvements, as draining, planting, erections of proper homesteads, &c., which now so deservedly occupy public attention, **LEASES OF NINETEEN YEARS** will be granted for these purposes. Cheap food, labour, fuel, and raw material of every description, will give the lessee an advantage over every other part of Great Britain; while the large and still increasing trade in coal affords an intercourse with all parts of the world, for importing the produce of their localities at cheap back freights, and for forwarding to their destination the manufactured articles. This more particularly applies to those undertakings where the consumption of coal forms a principal ingredient.

The South Wales Railway will pass through the town, touching the three seaports, and going over a large proportion of the estate on the sea-coast; while the contemplated inland railways will bring the collieries, ironstone, limestone, and stone quarries, within an easy distance of the agricultural counties of Hereford and Worcester, and the great chain of railway communication, connecting Birmingham, Liverpool, Manchester, and all the important manufacturing districts of England.

For further particulars apply to F. L. Brown, solicitor, Llanelly; John Williams, solicitor, 1, Venable-hall, Grosvenor Place, London; Messrs. Brooks and Green, estate agents, 20, Old Bond-street, London; Mr. John Farran, estate agent, 29, Soho-street, Liverpool; Alfred Henderson, solicitor, Alben Chambers, Bristol; Messrs. Hereford and Harrison, solicitors, Leeds; and Mr. G. H. Belas, 55, Camden-street, Dublin.

MINING ADVENTURERS' SUBSCRIPTION ROOM,

93, THREADNEEDLE-STREET, LONDON.

The ANNUAL SUBSCRIPTION to ONE GUINEA, which will entitle the subscriber to the daily use of the room, of the mining periodicals, and to the depositing and exhibiting of specimens of ore, and reports connected therewith.

The above annual subscription shall entitle a mining company to the exhibition of specimens, reports, and the rest of their papers, or captain.

It is intended, should this Subscription Room receive the support and patronage of adventurers generally, to obtain more ample accommodation for establishing an association in every respect commensurate with the important interest thereby represented; and, amongst the objects to be attained, such scientific parties, not being adventurers, as may be desirous to cultivate or extend a knowledge of this most important branch of national wealth, by affording the practical miner and the geologist more frequent opportunities of communication and association.

March, 1847.

TO BE LET, THE PARK-HILL MINES, DEAN FOREST, GLOUCESTERSHIRE—containing ONE MILLION TONS OF COAL, and ONE MILLION TONS OF rich IRON ORE, which, being calcareous, smelts well with argillaceous ironstone, and may be delivered in large quantities to the Staffordshire, Shropshire, and Welsh iron-works, at a price far below the cost of local ironstones. The mines are drainable by level, and can be opened at a trifling expense; and, were blast-furnaces erected, their produce might be smelted on the spot into excellent iron.—Apply (per post) to Henry H. Fryer, Esq., solicitor, Coleford, Gloucestershire.

COUNTY WATERFORD.—SLATE QUARRY TO BE SOLD.—THE INTEREST in ROSS SLATE QUARRY, distant nine miles from the city of Waterford, four from Kilmacshannon, three from Kilmadon, three from Portlaw, and three from the celebrated copper mines at Bournabon.

A considerable sum has been expended by the late proprietor in exploring the above quarry, and erecting suitable machinery to work it: the quality of the slate raised has been pronounced, by eminent judges, to be of a superior description, and not inferior, in mineral qualifications, to the best Welsh slate, as will be seen from the annexed testimonials.—This concern has been at work for the last eight or nine years, during which period the produce has been extensively made use of in covering houses in the neighbourhood of the quarry, and for many miles round. Markets have been established for the sale of them in the following towns—viz.: Carrickmacross, Clonmel, Cahir, Tipperary, Wexford, and the city of Waterford, where they have become established, and in much repute. Houses covered with them, as far back as the opening of the quarry, may be seen, where no trace whatever of decay or discoloration can be observed.

The quarry being only distant three miles from Kilmadon, where boats can be had or discharged, and a little further down the river, there is great facility for conveying the produce to the places before-mentioned and other markets.

This concern has only stopped working since the death of the late proprietor, which took place last April, and could be resumed without much expense, as new machinery has been erected, and the floor of the quarry free from rubbish.

Persons wishing to become purchasers of the interest in this concern, will be fully informed as to title, profit likely to be realized, and any other information requisite, on application to Arundel Hill, Esq., Donnybrook, Dubonville, Ireland, who will close with a purchaser, should reasonable terms be offered, as he is desirous to dispose of the concern without reserve.—John Hovenden, the late proprietor, who resides adjacent to the quarry, will, on application, show the concern, machinery, &c.

TESTIMONIALS.

Extract from Report on Ross Quarry, by Messrs. Walton and Coulthard, engineers.

In conclusion, we may state, that the Bournabon and Ross slates are nearly equal, but the latter is considered to stand the weather better.

From T. Oldham, Esq., M.R.A., Curator of the Dublin Society, and Engineer to the University of Dublin—August 8, 1844.

There were a few large ones (slates), which seemed sound, clean, and not heavy, and the general quality was not inferior to the ordinary Strawberry slates (same vein as Bangor)—the Ross did not appear to me liable to weather.

From Mr. Charles Howden, Blackrock, Dublin—May 31, 1844.

I showed Mr. Ovens (architect of the Board of Works) the Ross slates, and he highly approved of them; and gave Mr. Bell permission to cover the Government work with them, now in progress, at the Police Station, Kingstown.

Portlaw, May 31, 1845.

In reply, we may state, that, within the last five or six years, we have covered 30 or 40 houses with Ross slates; and they are a useful, good looking, article, and we have no reason to doubt their proving durable in quality.

For MALCOMSON, BROTHER, & SHAW, (Signed) ROBERT SHAW.

I can certify, that the Ross slates are the best that I have seen—they cover very well; are a good sound slate, and the weather does not affect them. The tenants are using them on the estate, where they are highly approved of.

(Signed) RICHARD EGAN, Slater to the Marquis of Waterford.

Wexford, May 23, 1845.

I received your letter, and likewise the case, containing the samples of slates, which, I must say, are very good, and will surely take here.

(Signed) NICHOLAS HAYES, Architect.

TO CAPITALISTS.—VALUABLE SLATE QUARRY, near the SOUTH COAST OF ENGLAND.—TO BE DISPOSED OF, BY PRIVATE CONTRACT, the UNEXPIRED TERM, with all the STOCK, MACHINERY, &c., of a truly valuable **SLATE QUARRY**, possessing advantages superior to most quarries in the United Kingdom. This very desirable property is situated only about three-quarters of a mile from a shipping place, where vessels of 150 or 200 tons can approach, and to which place the slate can be brought from the quarry, at the small cost of 10d. per ton, and from which place barges can be procured at 7d. per ton, if required, to convey the same to one of the most secure harbours in the English Channel, where vessels of 500 to 700 tons can at all times receive their cargoes safely.

The quarry produces slabs of the largest size, and are brought out so true, as to require little labour to give them a fair surface, whilst they are also easily converted into the required covering slates of all descriptions; the quality of which, for durability and colour, is unquestionable, as may be ascertained in the vicinity, where public buildings have been covered with this slate from 100 to 200 years, and which is now perfect. Affidavits can also be obtained from the oldest tradesmen, if required, in proof of its justly-merited reputation.

There are at present on the floors (which are very extensive, and through which level railroads pass) a stock of slate, of all descriptions, in slabs, flooring, and sizes, which, with the removable machinery, is valued at £4000.

This very important quarry is worked by Sims's Patent Combined Cylinder Steam-Engine (and which quarry should be stated to have a fall of 150 to 200 feet for all wastes), the lease of which, together with the establishment, machinery, and stock of slate, is now offered for £5000.

The most satisfactory reasons can be given for its disposal by the present proprietor, and all further particulars known, on application at the office of Mr. W. H. Smith, 10, Warrford-court, Throgmorton-street, London; and Mr. G. Trickett, Jun., Union-road, Plymouth, where samples of the slate may be seen.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDIENT MODE of effecting this very hazardous operation. From many testimonials to its usefulness, with which the manufacturers have been favoured from every part of the Kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; I have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, DICKFORD, SMITH, and DAVEY, Gunborne, Cornwall.

BRUNTON'S PATENT ORE-DRESSING FRAME.

These FRAMES, for DRESSING TIN, COPPER, and OTHER MINERALS, having been in use, and given satisfaction, on several mines, during the last two years, the PATENTEE begs to call the attention of all Adventurers and Mine Agents to the great advantages, both as regards economy of labour and the great increase of mineral obtained by their adoption. The following gentlemen can certify as to their utility:—Thos. Bolitho and Sons; E. N. Johnson, Esq.; Capt. Jos. Vivian, Cook's Kitchen Mine; Capt. R. Kernick, St. Ives Consols; Capt. R. Edwards, Wheal Franco; Capt. W. Teague, Wheal Gwyn; Capt. James Minors, and Capt. Matthew Rogers, Carn Breva Mines.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE FOR MACHINERY AND AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public.

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN.

J. MURDOCH (successor and late assistant to Mr. Hebert)

INVENTORS and PATENTEEs, that, at his OFFICE, they can obtain REFERENCE TO A CLASSIFIED LIST OF PATENTS.

(THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.

SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.

FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

IMPORTANT TO MINE ADVENTURERS.—TO BE DISPOSED OF, BY PRIVATE CONTRACT, ONE-FOURTH, ONE-THIRD, or HALF, of one of the most promising MINES in this country. The outlay, to get the mine in good course of working, will be £10,000; for which outlay, speculators will receive at least 20 per cent., after the first year. Parties, therefore, taking one-half of the mine, can, if they prefer it, have the management transferred to themselves.—For further particulars, apply to "A. B.," Post-office, Truro.—July 1, 1847.

IRON GROUND CRANES.—RAILWAY COMPANIES. DOCK COMPANIES, WHARFINGERS, &c. &c., can be SUPPLIED with IRON GROUND CRANES, of superior construction, and of any size, to lift from one to ten tons each.—Drawings and prices may be had on application to Mr. Alex. Reid, Monument Chambers, Fish-street-hill.

WANTED, A SET OF PUMP STOCKS (without working-barrel), 16-inch diameter, for a depth of 92 yards. Also, a 15-inch or 16-inch PLUNGER SET, complete, for a depth of 63 yards.—Required the price delivered at Wigan.—Apply to Messrs. Hustler and Brancher, Orrell Colliery, near Wigan. Orrell Colliery, July 6, 1847.

WANTED, by the advertiser, lately employed in the superintendence of mining operations on the continent, and who possesses a knowledge of assaying, chemical analysis, the reduction of lead and copper ores, surveying, levelling, mapping, together with other branches of civil engineering, AN ENGAGEMENT, to go abroad.—Address (post-paid), "M. E.," care of the Editor of the Mining Journal, 26, Fleet-street, London.

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.

THREE KING'S COURT, LOMBARD-STREET, LONDON.

THOMAS P. THOMAS, MINE AGENT, AND DEALER IN RAILWAY AND OTHER SHARES.

10, THREADNEEDLE-STREET, LONDON.

BUYER in Wheel Trilway and Wheel Mary Ann, at fair market prices.

MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS. N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain.

WILLIAM H. SMITH, MINING SHARE AGENT, 10, WARREN-COURT, THROGMORTON-STREET, LONDON.

JONATHAN DAVEY, MINE AGENT, SURVEYOR, AND SHAREBROKER. MATTHEW STREET, FAVISTOCK.

Mines surveyed, inspected, and reported on, at the shortest notice; plans, sections, and dialling performed, by day or contract.

MESSRS. WINSTANLY AND CO., SHAREBROKERS. Inform their friends and the public, they BUY and SELL every description of RAILWAY SHARES on the most advantageous terms; they also make advances upon the deposit of scrip and shares for periods as may be agreed.

6, Bank Chambers, City.

JAMES LANE, MINING SHARE DEALER 15, OLD BROAD-STREET, LONDON.

BRITISH MINING OFFICES, 41, MOORGATE-STREET, LONDON.—PROSPECTUSES may be had, and ORIGINAL SHARES ALLOTTED in the COPPER and SILVER-LEAD MINES connected with these offices, on application to the secretary.

THOS. HENRY TAUNTON.

CONSOLIDATED COPPER MINES OF COBRE ASSOCIATION.—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of proprietors of this association will be HELD at the office of the company, 26, Austinfriars, on Monday, the 26th July inst., at One o'clock precisely.

By order of the court of directors.

26, Austinfriars, July 7, 1847. WILLIAM LECKIE, Secretary.

GEORGIA TIN MINES, divided into 2048 shares, and worked ON THE COST-BOOK SYSTEM.

The necessary arrangements having been made for carrying out the operations of the company, all future communications are requested to be addressed to the offices of the company, 21, THROGMORTON-STREET, LONDON, where the specimens and plans with the correspondence, may be seen.

ROYAL SANTIAGO MINING COMPANY.—The directors hereby give Notice, that the ANNUAL GENERAL MEETING of the shareholders will be HELD at the office of the company on Wednesday, the 14th of July next, at One o'clock precisely, when the directors will make their report.

26, Broad-street-buildings, June 26, 1847.

TAMAR SILVER-LEAD MINING COMPANY.—SMELTING DEPARTMENT.

Notice is hereby given, that the INTEREST, at 5 per cent., to the 30th inst., on the DEBENTURES of this company, will be PAID on Wednesday, the 14th proximo, and following Wednesdays between the hours of Twelve and Four o'clock.

44, Finsbury-square, London, June 24, 1847.

TRELEIGH CONSOLIDATED MINING COMPANY.—A DIVIDEND (the second since May last) of SIX SHILLINGS per share—being 5 per cent. on the paid-up capital—has been this day declared, PAYABLE on Monday, the 2d of August, and on every succeeding Monday, between the hours of Eleven and Three o'clock. The Coupons, with a list, according to a form, which may be obtained at the office, must be left for examination three clear days previous to payment.

27, Old Broad-street, July 5, 1847. WM. NICHOLSON, Secretary.

ASSAYING AND ANALYSIS.—MR. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY.

23, HAWLEY-ROAD, KENTISH TOWN, LONDON, to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

ADCOCK'S PATENT SPRAY PUMP.—This important INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION at LLANHIDDEL, at pits belonging to R. J. Blewitt, Esq., M.P., Llanthorn Abbey, near Newport, Monmouthshire, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his office, 137, Strand, London, where pamphlets, descriptive of the invention, may be had; at the office of the Mining Journal, 26, Fleet-street; and through any respectable bookseller.—price 2s.

VENTILATION OF COAL MINES.

BIRAM'S ANEMOMETER, FOR ASCERTAINING THE VENTILATION OF COAL MINES.—THIS INSTRUMENT is now EMPLOYED by many EMINENT ENGINEERS, to whom reference can be given.

For particulars apply to the patentee, B. Biram, Esq., Wentworth, near Rotherham; or to the maker, John Davis, Derby, manufacturer of Miner's Dials, Pit Barometers, and Safety Lamps.

DISSOLUTION OF PARTNERSHIP IN THE COPPER AND ZINC SMELTING BUSINESS.—Notice is hereby given, that the PARTNERSHIP heretofore subsisting between WILLIAM SNEYD, CLEMENT SNEYD, JOHN SNEYD, JAMES KEYS, and THOMAS SNEYD KYNNESELEY, as COPPER and ZINC SMELTERS, at WHISTON, in the parish of Kingsley, in the county of STAFFORD, is DISSOLVED, and that the same BUSINESSES will henceforth be CARRIED ON by the said JAMES KEYS and his SON, John Keys, under the style, or firm, of

June 23, 1847. JAMES KEYS & SON.

PIERS FOR BREAKWATERS, BRIDGES, VIADUCTS, RAILWAYS, EMBANKMENTS, HARBOURS, and all WORKS requiring PILE-DRIVING, of every description, may be cheaply, quickly, and securely founded, in or under water, by the ATMOSPHERIC PROCESS, which is patronised by the Government, the Trinity Board, the Ordnance Department, and many eminent engineers and contractors.

The PROCESS may be SEEN at No. 9, BUCKINGHAM-STREET, ADELPHI, and a SHARE in the PATENT may be obtained from the projector and sole proprietor's application to Messrs. White, Broughton, and White, 12, Great Marlborough-street.

PATENT GALVANISED IRON AND WIRE ROPE WORK. MILLWALL, POPLAR.

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process of galvanising wire rope, adding only £10 per ton instead of £30, under the ordinary process. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.

AGRICULTURIST CATTLE INSURANCE COMPANY, 8, CHATHAM PLACE, BLACKFRIARS, LONDON. And No. 9, SOUTH ST. ANDREW STREET, EDINBURGH. (Registered under 7 and 8 Victoria, cap. 116.) Subscribed Capital £250,000.

This company was established for the protection of FARMERS and AGRICULTURISTS against LOSS BY DISEASE or ACCIDENT among their LIVE FARMING STOCK, in June, 1845; and, on the 31st of December, 1846, had issued 15,000 agreements, and paid upwards of £23,000 for losses.—This being a PROPRIETARY COMPANY, with a subscribed capital, insurers incur no liability beyond the amount of their premiums, and are put to no additional expense. Three-fourths of the insured amount is paid in case of loss, and claims are punctually paid every week.

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Insurances on Lives are effected—Annuities and Endowments granted—and every branch of Life Insurance conducted on the most liberal terms.—Farmers and Agriculturists will find this office moderate in its rates, and peculiarly adapted to their position and circumstances. Annual Premiums for the Insurance of £100 on a Single Life.

Age next Birth Day.	Whole of Life without Profits.	Whole of Life with Profits.	For the Term of	
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15	£1 11 3	£1 12 7	£9 16 10	£9 18 8
20	1 15 0	1 17 8	1 1 3	1 2 5
25	1 19 10	2 3 10	1 4 0	1 4 8
30	2 5 7	2 9 1	1 5 9	1 6 4
40	3 0 7	3 5 4	1 9 10	1 11 4
50	4 4 7	4 11 4	2 1 6	2 8 7

Application for prospectuses, and every other information, may be made to
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Assurances for terms of years are granted on the lowest possible rates.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 65 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may borrow.
£1000	£0 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
		1838	192 3 0	87 1 0	13 10 2	395 11 1
		1839	165 11 10	74 1 9	11 3 1	346 2 3
		1840	116 7 6	54 0 10	7 18 10	296 13 4
		1841	111 6 8	49 10 0	7 10 4	247 4 8

The division of profits is annual, and the next will be made in December of the present year.
F. FERGUSON CAMROUX, Secretary.

LEMONNIER, HAIR-WORKER to the Queen,
and Member of the Academie de l'Industrie, and who obtained a Silver and Gold Medal at the Exhibition, has just INVENTED a NEW DESIGN, as Palm Trees, Wreaths, Ribbons, and Cypresses, which he executes with hair in its natural state, without using gum or other cement. A variety of Trees executed by a mechanical process.
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Part I. of this work is addressed to those who are prevented from forming a matrimonial alliance, and will be found an available introduction to the means of perfect and secret restoration to manhood.—Part II. treats upon those forms of disease, either in their primary or secondary state, arising from infection—showing how numbers neglect to obtain competent medical aid, entail upon themselves years of misery and suffering.

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With 25 coloured engravings.
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The author of this singular and talented work is a legally qualified medical man, who has evidently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaluable addition, by demonstrating the consequences of excesses, which must act as a salutary warning to youth and maturity, and by its perusal, many questions may be satisfactorily replied to, that admit of no appeal, even to the most confidential friend.—*Eva.*

Unquestionably this is a most extraordinary and skilful work, and ought to be extensively circulated; for it is quite evident that there are peculiar habits acquired at public schools and private seminaries, which are totally unknown and concealed from the conductors of those establishments, and which cannot be too strongly reprobated and reformed. The engravings that accompany the work are clear and explanatory; and being written by a duly-qualified medical practitioner, will, doubtless, be the means of saving many a youth, as well as those of maturer age, from the various evil consequences resulting from early indiscretions.—*Magnet.*

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Birkenhead, near Liverpool, Jan. 8, 1847.

Sir,—I have been afflicted with a severe cough and shortness of breath for nearly eight years, and after trying various remedies, did not myself any better. I purchased a small box of KEATING'S LOZENGES of you, from which I found great benefit. The second box, 2s. 6d., completely cured me, and I can now breathe more freely, and am as free from cough as ever I was in my life. Hoping that others, similarly afflicted, will avail themselves of so certain and safe a remedy.

I remain, Sir, yours faithfully,
WILLIAM ANDERSON.
Mr. Geo. H. Howell, chemist, 72, Dale-street, Liverpool.

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under the immediate care of the inventor, and established for upwards of 30 years by the profession, for removing BILE ACIDITIES, and INDIGESTION—restoring APPETITE, preserving a moderate state of the bowels, and dissolving uric acid in GRAVEL and GOUT; also as an easy remedy for SICK NEURGES, and for the fibrous affection incident to childhood it is invaluable.—On the value of magnesia, as a remedial agent, it is unnecessary to enlarge; but the fluid preparation of Sir James Murray is now the most valued by the profession, as it entirely avoids the possibility of those dangerous concretions usually resulting from the use of the article in powder, and in the over-dosed liquids of detected imitations.—Sold by the sole consignees, Mr. Bailey, of North-street, Wolverhampton; and by all wholesale and retail druggists and medicine agents throughout the British empire, in boxes, 1s. 2d., 2s. 6d., 5s. 6d., 11s., and 21s. each.

N.B.—Be sure to ask for "Sir James Murray's Preparation," and to see that his name is stamped on each label, in green ink, as follows:—"James Murray, Physician to the Lord Lieutenant."

DR. POTTS'S ATMOSPHERIC SYSTEM OF PILE DRIVING.

In the *Mining Journal*, of July 27, 1844, and following number, we gave a description of patented invention of Dr. Potts, for the formation of breakwaters, and other works requiring pile driving in sandy and shingly situations; and having had our attention lately called to the progress now making, and had the inspection of some most ingenious models, we now offer a few remarks on this interesting subject. Dr. Potts had for many years turned his attention to the matter; and, as Nature never errs, in the plans he suggested to himself, he ever attempted an imitation of her works as nearly as possible. The coral insect had claimed his peculiar notice, and from the extensive masses of rock formed by this tiny architect, consisting of numberless hollow tubes, it struck him that tubes of iron, sunk in the sand, or shingle, would form an impenetrable barrier to the fury of the ocean, and make solid and immovable foundations for lighthouses, bridges, dock-walls, &c. There are, however, some properties in wet sand, which render pile driving in that element not only difficult but impracticable for any great work; as a proof of which, we can state, that Capt. Bulcock, having driven a pointed iron bar, 3 inches diameter, in the Godwin Sands 12 feet, it took 46 blows of a ram of 1 cwt., at 10 feet fall, to drive it 1 inch further. The idea of exhausting the upper surface of the hollow pile, of air, having struck the inventor, he immediately proceeded to put it in practice, and with the most successful results. A hollow cylindrical tube, placed vertically on a body of sand and water, cannot be made to descend without incompressible pressure, and then only a few inches; but on exhausting the air from the tube, it will descend as if by magic. Upon this principle, Dr. Potts has founded a system of marine architecture, which promises to be of immense importance, and lead to the erection of sea and river works, and the reclamation of land which could never have been effected by any other means, and the security of foundations thus formed, and the rapidity and economy of their construction, is truly astonishing. The Lords of the Admiralty, the Board of Ordnance, the Trinity Board, and other branches of the Government, have already satisfied themselves of the value of the discovery, and works are being constructed in various parts of the coast upon Dr. Potts's principle. Tubes are soon to be inserted in the Godwin Sands by order of the Lords of the Admiralty, to ascertain the nature of the substratum, and other works, on an extensive scale, will soon be commenced under the auspices of Government. To give some idea of the rapidity with which a pile descends on the pneumatic principle, we give the following results of driving one 2½ feet diameter, by direction of the Trinity Board—the state of the weather requiring it to be done at three several periods:—Saturday, the 19th July, 1845, in 3 hours, 22 feet; Monday, 21st July, 1845, in 1 hour, 10 feet; Saturday, 26th July, 1845, in 1 hour, 1 foot 7 inches.—Total depth below the surface of the sand, in 6½ hours, 33 feet 7 inches. The adoption of the system by the Government will confer vast benefits on hydraulic architecture; and we call the serious attention of engineers and contractors, connected with such works, to the subject, convinced that it will be found economical, safe, and expeditious.

ON WATER AS FUEL.—This seemingly strange idea originated in an occasional remark of Sir Humphrey Davy, that, on the problematic exhaustion of coal, men will have recourse to the hydrogen of water, as a means of obtaining light and caloric. As the gas used for lighting consists of hydrogen and a little carbon, it is only the latter which would have to be added, after the water had been decomposed into its elementary parts. M. Jobard, of Brussels, was the first who extracted from water a gas, of twice as great an illuminating power as that obtained from coal. This condensed product, hydrogen gas, by the decomposition of vapour passing through vertical retorts, filled with coke, being in a state of white heat. And at the moment of the hydrogen being thus formed, it is mixed with a little carbonic acid gas, obtained by the distillation of oil, tar, or naphtha, or other course substance, hitherto useless in the gas manufacture. In the *Bulletin du Musée d'Industrie* M. Jobard's method has been amply detailed. He says that at the expense of one pennyworth of oil a light may be obtained during 20 hours, equaling that of 10 tallow candles. Even conceding that M. Jobard's discovery has not quite attained the object of using water for light, fuel, &c., electric it has done something towards it. These ideas led us to a calculation of Professor Faraday, that the elements of a single molecule of water contain 800,000 charges of an electric battery, consisting of eight troughs of two inches in height and six inches in circumference. At the amount of these stupendous forces the human mind is startled; because, if we should ever be able to elicit and make them available, the power of the mightiest steam-engines would dwindle to nothing, and thus ends would be attained by the means of things seemingly trifling and worthless, which cannot now be accomplished by any sacrifice or expense.—*Civil Engineer.*

MARCH OF LOCOMOTION.—In a prospectus, issued by the promoters of the Manchester and Liverpool Railway in the year 1829, it was stated, amongst the many advantages set forth, that "the average time of conveyance by water is about 36 hours—by railway it will only be five or six hours." Since that time, what was by many deemed an impossibility, has really been brought to pass; and now the journey between the two places is performed in an hour. The distance between Manchester and London may now be traversed in the time which it was computed would occupy a train in going to Liverpool; and yet we are assured, by practical and scientific men, that railway travelling is only its infancy.

SAFETY OF RAILWAYS.—At the recent presentation of plate to Mr. J. P. Westhead, by the shareholders of the Manchester and Birmingham portion of the London and North Western Company, Capt. Huish stated, that the number of servants employed by the company, exclusive of about 2000 plate layers, was 6418; and that in a period stretching over 19 years, from the time at which the Manchester and Liverpool line was opened, the company had carried 55,000,000 passengers, while the late unfortunate accident at Wolverton was the first great calamity that had occurred. This, he thought, was sufficient to show that the company had done their duty to the public, and that the directors had exercised uncommon care and prudence in the choice of their servants. We believe that our readers will generally concur in the opinion thus expressed by the gallant captain.—*Railway Record.*

ACCIDENT AT THE DEWENTRE VIADUCT ON THE LINES AND DEWENTRE RAILWAY.—On Thursday morning, about one o'clock, one of the arches of this viaduct (which is now in course of construction) gave way, and fell in, owing to some of the workmen, who were working in the night, having inadvertently put too great a weight of stone on one side of the arch, before the other side had got sufficiently backed up, which caused the centre to give way, and the whole mass of masonry to be precipitated to the ground. We are happy, however, to say that the misfortune will only be one of a very temporary nature, no accident whatever to any person connected with the works having been caused by it. The misfortune will have no effect as to the opening of the line, the works on this part of the contract being in a more forward state than some other parts.—*Halifax Guardian.*

NEW ROUTE TO LAKE SUPERIOR.—The British Government have established a semi-monthly mail to the copper mines on Lake Superior, on the north side of the lake. The conveyance leaves Toronto on the 15th and 28th of each month, and takes passengers through in 60 hours to Sault Ste. Marie, by way of Lake Simcoe, in Sturgeon Bay on Lake Huron, and thence to Owen's Sound, and then to the Sault. This is 450 miles nearer than by Lake Erie.

THE ATMOSPHERIC RAILWAY SYSTEM.

Messrs. Clarke and Varley's Report on the advantages to be obtained by the adoption of their Elastic Metallic Iron Tube, as a means of developing the principle of Atmospheric Propulsion on Railways.

[Read at the British Association, Oxford, July, 1847.]

In directing the attention of the engineering department of the British Association for the Advancement of Science to this invention, we would briefly premise, that whatever obstacles and failures may have hitherto occurred, in attempting to carry out the pneumatic principle of propulsion, have arisen from the complexity and imperfection of the machinery employed in opening and shutting the longitudinal valve, the great amount of leakage at the valve and air-pumps, the power required to produce the exhaustion, and the loss from friction and other causes. These failures have chiefly been attributable to imperfect construction of the apparatus, and the principle on which such construction is founded; but we trust we shall be able to show to the satisfaction of the members of the association, that we have completely surmounted every obstacle which the supporters of the principle have had to contend with, and removed every objection that has been urged against it by its most strenuous opponents. Even admitting the serious impediments which the proper working of the tube with a longitudinal valve has had to encounter, in consequence of the immense loss of power from friction, leakage, and other causes, it is, nevertheless, preferable, as regards economy and safety, to every other system of locomotion that has hitherto been brought into operation, notwithstanding the irregularity of speed in consequence of the variable rate of exhaustion, and the great uncertainty of the arrival of the trains at the different stations along the lines. We shall now proceed to show that our invention with the flexible wrought-iron tube is the simplest method that can be devised for connecting the piston with the train, since no lubrication is required beyond what is necessary to lessen the friction of the piston on the interior of the tube—the coupler, or connecting-plate, passing along the longitudinal groove or slit without any sensible resistance, and that both in the original cost of construction, and expense of working, it is vastly beneath any other system of railway transit that has hitherto been brought into use. The tube, or pipe, in which the exhaustion takes place, is constructed of sheet-iron, rolled to a proper thickness, drawn into proper lengths, and of the requisite width, to answer the intended diameter; these sheets are then formed into tubes, in the usual way, and drawn through dies, to render them truly cylindrical—a shape which induces a tendency to close, in consequence of the elasticity of the material—so that the edges, which are truly planed, come together with a slight degree of force, and form a perfectly air-tight coincidence; and when the tube is thus completed, the attachments for opening it are rivetted on. In laying down a line of tubing, the ends of each piece are merely made to abut against those adjacent to it, having a slip of vulcanised India-rubber cemented over each joint, about 2½ in. wide, and one-eighth of an inch in thickness, and over this a band or strap of thin sheet-iron is firmly keyed to the tube; the whole is then supported at the joints upon upright bearers, fixed in cast-iron chairs, which chairs are screwed to the horizontal sleepers on which the rails are laid, and the upper ends of these uprights are fixed to the thin slip, or strap, already mentioned, one on each side at the middle of the tube. Along the whole range of the line of railway are placed longitudinal bars of malleable iron, one on each side, which bars are supported on transverse horizontal rods, fixed on the top of the tube. A framework is fixed to the leading carriage of a train, in which two pair of horizontal wheels revolve in contact two and two—one pair before, and another behind, the coupler, or connecting-plate—by which the motion is communicated to the train; this is a steel plate, half an inch in thickness, and of a width sufficient to confer a competent strength for carrying on the heaviest train that may ever be attached to it. The horizontal wheels, just mentioned, are of such diameter, that when between the bars they force them open, and, consequently, open the tube to the same extent, and admit the connecting-plate to pass along without friction, as the opening thus effected is greater than the thickness of the plate; and the elasticity or spring of the tube has a tendency to bring its edges together behind, and counteract the force required to open or extend the distance between the longitudinal bars in front, which opening is effected by a compound rolling motion, thus almost completely neutralising the effect of friction in producing the transit. The tube is supported about 2 in. from the ground; and thus admitting every part of it to be got at for painting, and effecting other necessary alterations and repairs. The longer the tube is in use, the more perfect will the coincident edges become; and if, by any accident, a section of the tube should be damaged or deranged, it could be replaced, or adjusted, in a very short space of time. On first noticing the imperfections of a rigid tube, and longitudinal valve, with the lubrication, the friction, the leakage, and the uncertainty of action, we directed our attention to the possibility of obviating these imperfections and difficulties; and, having been struck with the idea, that a wrought or malleable iron tube closing by its own elasticity, would accomplish the end proposed, we took out our patent, and commenced a series of experiments, to test the practicability of the scheme, which, to our gratification, has turned out to be completely successful. At first, we fitted flanges to the edges of the tube consisting of thin ribs of iron, on each side of the opening throughout the whole length, and lined with leather, or some other suitable substance, as felt, or India-rubber. We next formed one rib, or flange, concave, and the other, convex, to fit into each other, and afterwards adopted various other forms; but feeling convinced that in every case any soft material, such as felt, leather, or India-rubber, would be attended with great expense, and need frequent repair and renewal, we, at last, adopted the simple and, as it has proved to be, superior plan, that we have now the pleasure of submitting to the inspection of the public and the members of this association. This plan has been, and is daily being tested, on an experimental line of 800 ft. in length, and with a tube of 15 in. in diameter, laid down near the Poplar station of the London and Blackwall Railway; and we find that the edges of the longitudinal slit come into sufficiently close contact to render the tube perfectly air-tight, so as to admit of its exhaustion to any required degree, a vacuum of the air-pump. With respect to the various details of working an atmospheric railway on our system, we would just observe, that we have devoted our sole attention for the last three years to bring it as near perfection as possible; and that we are prepared with simple and most effective plans for stopping at stations, passing at sidings, and other movements, which have hitherto proved to be difficulties, and with such facility, that we would undertake to work a line four miles in length—such, for instance, as the London and Blackwall Railway—with trains each way, passing every 15 minutes, with the greatest regularity, and that, too, with a single line of tube. Having now given a complete description of the flexible tube atmospheric railway, we would beg leave briefly to draw attention to many advantages which exist in the pneumatic principle itself, on which we believe but little thought has been bestowed. On lines, where the traffic is but moderate, the stationary engines, during the time they are not required for forming the vacuum, might be employed in grinding corn, pumping water for irrigating or draining lands, sawing timber or stone, and a variety of other useful and profitable mechanical or agricultural operations—while the possession of great power at intervals through a line of country connected by a railway, would enable a company, by judicious management, to let off a large portion of the power with great advantage. For foreign countries, in particular, this system offers immense advantages; and the tubes being so light, they can be transported from place to place with the greatest facility—while the inclines which can be overcome, renders the first construction of a railway, as compared with the locomotive system, most particularly economical, by avoiding a vast deal of cutting and embankment. We now most respectfully invite the engineering and scientific talent of this and other countries to inspect our full-sized experimental line, which is at work daily, from one till five. We crave the most scrutinising and searching investigation, convinced that we have solved the problem of the practicability of railway traction on the atmospheric principle—our opinion being borne out by many hundreds of talented individuals, who have minutely inspected the working during the past two months. We hope that this, our invention, will meet with your approval. **CLARKE & VARLEY.**

IRON BRIDGES ON RAILWAYS.—A circular has been issued by the Commissioners of Railways to the secretaries of the different railway companies, requesting them to make a return of the several railway bridges on the lines now working, or constructing, under the direction of the company designated, which derive their principal support from either cast or wrought-iron. A hypothesis expressed that, wherever the security of the structure is in the least doubtful, the directors will take measures to add to its stability; and, in the meantime, to direct the speed of trains to be reduced in passing. The enclosure is a formula of return in a tabular form, the columns of which have the following headings:—Name of bridge, situation of bridge, number and width of openings, number and dimensions of piers, total length, height, width, general description of the construction, dimensions of the construction, dimensions of the principal parts, remarks.

CAST-IRON BRIDGES ON RAILWAYS.—On the issue of the controversy to which this subject has given rise, hang the lives and deaths of multitudes. The following most important remarks have appeared in the *Times*, in a letter signed "A Practical Man":—"Cast-iron is a remarkably hard and rigid substance, but exceedingly brittle, and though it will bear an enormous pressure, gradually applied, without fracturing, it will break under a comparatively trifling blow. Now, when a cast-iron girder is used to carry the weight of a building placed above it, the weight is gradually laid upon the girder, and when finished it is subject to no particular variation, and the girder supports its burden firmly and securely. But when a cast-iron girder is applied to carry a heavy train across a bridge, the weight it has to bear is very suddenly, and with express trains almost instantaneously, thrown upon the girder, and as suddenly removed, and hence it assumes to all intents and purposes the character of a blow, and the girder is subjected to a strain which it is quite unfitted to bear. Rolled iron rails are invariably made use of, because it is a well-established fact that cast-iron rails would fracture under the rapid speed of a train, and yet cast-iron is recklessly employed in the form of girders, which are only rails of a much larger kind. I am in the constant habit of seeing iron girders tested in the usual manner, by the hydraulic press, but this ordeal does not prove their fitness for railway purposes, because the power of the press is very gradually applied, and as gradually relaxed. I saw a practical proof of this a few days ago—a large cast-iron girder had an accidental fall, and it immediately broke into three pieces. I could multiply this assertion by many similar practical proofs; but I will only add, that it is my firm conviction—a conviction strengthened both by theory and practice—that a cast-iron girder ought never to be trusted to bear a vast weight suddenly placed upon it, and as suddenly removed; and, therefore, cast-iron girders should never be used for the means of railway transit, as in every case they are subjected to strains which, from their very nature, they are unable to bear."

SIR C. LEMON ON REPEAL OF THE COPPER ORE DUTIES.

(Continued from last week's Mining Journal.)

That smelting on an extensive scale, and by imported ores should not succeed in France, is almost a necessary consequence from the situation of the five coal-fields of that country. They all lie far away from the coast, and the coal must traverse nearly the whole breadth of the kingdom, before it can come in contact with the imported ores. The consequence is, that on the sea-coast of France, English coal is cheaper, and is generally consumed. To smelt with this coal, in the competition with an established business in England, where the greatest skill is practised, aided by an unlimited command of material, and where the coals used are on the coast, and their price is about one-sixth of the price paid in France. To illustrate this, I will take two ports on the coast of France, and go no further into the statistics of coal. One of these ports shall be a Channel port, and the other in the Mediterranean. First, then, of Havre. I have very lately had a letter from the English Consul at that port, who informs me that all the manufacturers in his consulate are supplied with English coals only, which are often purchased at the price of 11. 15s. per ton of 2240 lbs. At Swansea, I have before said that the cost to the smelters is not more than 3s. 6d.

The Mediterranean port to which I have alluded is Marseilles. I know not to what cause to attribute it; but it is, nevertheless, true, that the freight from Cardiff to Marseilles is less than to the coast opposite our own shores. A wealthy and most intelligent manufacturer and proprietor of iron-works at Marseilles, has assured me that the fact is so; and, further, that he pays less for the freight of coals from England, than for the freight of coals from France. He believes that the coals brought from the great coal-field of St. Etienne must pass in their way to Marseilles. The consequence is, that hardly any but English coals are used in this part of the Mediterranean. The contracts for all the steamers made for English coal; manufacturers consume it; and it enters largely into the price of every thing, the raw material of which is obtained by the use of coal. A boiler made at Marseilles of English iron, now costs one-third less than one made of French iron; hence the enormous duty on the former, which, before the late rise of prices, amounted to 10 per cent. Can it be believed that copper ore which must pass through at least as expensive a process as that for making iron, can be brought into competition with English copper, smelted under all the advantages which attend its reduction at Swansea; where the same coal which costs at Marseilles from 20s. to 25s., is obtained for 3s. 6d.? That there has been some stir in the smelting-works, in the south of France, is not improbable, on account of ores sent from the French settlements in Africa.

I will notice but one topic more relating to France; but it is one on which the petitioners appear greatly to rely.

They say that the export of copper from this country to France has greatly declined; and this because our tariff of 1842 has driven the French to seek their supply of copper from other countries.

That there has been a decline in the quantity of copper sent from this country to France in the year 1846, compared with that of 1845, I admit; and this is almost a necessary consequence of the diminished produce of Cuba and Cornwall, which has been only partially compensated by the increase from Chili, Copalpo, and Australia. For, if the total export from diminished production had been to the full extent of that of last year, less could have been sold to our own manufacturers, and of that I hear no complaint. Now, the total produce from whence the export should arise, appears to have fallen off 1326 tons, and is thus accounted for.

The copper to be smelted from foreign ores imported in 1846, was less than that in 1845 by 294 tons; and the Cornish mines produced 1029 tons less—making a total of 1326 tons. Nearly three-fourths of this deficiency, it will be observed, has fallen on the Cornish mines; a failure which, I trust, will be removed by the prospect of improving prices. And certainly this is no time to throw needless discouragements on the exertions of the British miners.

From France the petitioners pass on to the United States; where, we are informed, the great effort is to be made to ruin Swansea.

The fact that the Americans send us annually from 700 to 1100 tons of their ore to be smelted here, seems to throw a doubt on the probability of their setting up as rivals in smelting ores imported from Cuba and Chili. It is natural that they should first endeavour to smelt their own produce—and that, I believe, they have long contemplated, and are now attempting to accomplish, with a very different prospect of success, than that of copper ore which have been discovered on Lake Superior, and other parts of the United States. But the experiment is proceeding on a small scale, and I hear without exciting any sanguine expectation of success.

I have before me two letters written by a gentleman connected with one of our largest smelting-works, and who went to America principally to inspect the processes by which the Americans are endeavouring to conquer the great difficulty arising from the high prices of coal, and the want of fuel in blast-furnaces. The experiment is new; that near Boston not having commenced till January last.

It is plain that the conviction on this gentleman's mind is, that the scheme is not promising; and I have been informed by a very experienced smelter, that, by processes such as he very minutely describes, at least 25 per cent. of the produce in the ore must be lost. Wood is used in the first process, anthracite in the remainder; and this anthracite costs 5s. per ton. The works at Boston are on a very small scale, not capable of producing more than three or four hundred tons of copper per week; and this copper is impure, containing only 95 per cent. of metal. Ores from Connecticut, New Jersey, and Lake Superior, are brought to these works.

At Baltimore, also, the works are very small, and, according to the writer whom I quote, the smelted ore is by no means sanguine as to the results of their experiment. They use bituminous coal, at a cost of 17s. 6d. per ton.

This, then, is the extent of the experiment which has caused so much trepidation amongst our smelters. Two small works, capable at the utmost of turning out 800 tons of impure copper in a year, with a doubtful prospect of continuing to produce even so much. Against this, let us set the vast capital, establishments, and means enjoyed by those who live in England; who command the markets of the world, and make annually from 20,000 to 30,000 tons of the best copper, of which a considerable portion is sent to America itself.

In the United States, as in France, the question ultimately turns on the prices of coal. What the comparative cost must be, we may partly judge from this, that coals from Liverpool and Newcastle are the chief supply of the towns on the coast. Nova Scotia, also, sends some; but the freight from thence is hardly less than from Liverpool. I will not trouble your lordship with a description of the different coal fields of the United States. A general glance will suffice to convince you that no great reduction of prices at Boston or Baltimore can take place till other means of transport are brought into use; for, with the exception of a small deposit of lignite in Virginia, entirely unsuited for smelting, all the vast store of coal with which the United States abound, lies beyond the Alleghany Mountains; and the distance from the coast, where the coal has to be transported, is rendered more difficult by the nature of the country which the coal has to traverse. Hence the great cost which it bears; and hence, also, the strange fact that America, and Ireland, put together, is supplied from our mines by transport across the Atlantic. By a Price Current from Boston, dated Feb. 25, 1847, now before me, I see that the lowest price of any sort of coal was 87s. per ton.

I have many more documents which I could quote, which show that the Americans themselves are not sure of their ground; and, again, I ask, for a doubtful success of this kind ought we to be frightened out of our policy and our revenue?

In concluding this topic, I venture to say, that a gentleman of the highest authority in matters relating to the United States, has assured me of his conviction, that copper ore is not now, nor is likely to become, an article much imported. I dare not mention his name; but were I to do so, I am sure that his opinion would be received as indisputable. I will trouble your lordship but with one topic more, arising out of the petitions to the House of Commons, and which I have called their 6th plea. That "the result of the change of 1842 has been pernicious to the foreign trade in copper, and to the manufacturing trade in the district of Manchester."

We have here two propositions: of which the first asserts a diminution in the foreign trade in copper since 1842. This trade, of course, consists of imports and exports. Of the imports I have already given a table, showing an increase of 63 per cent. since the tariff; and I subjoin a table of exports, showing that there is no better foundation for the alleged diminution to be derived from the case of the export trade.

COPPER EXPORTED.

Average of four years, previous to 1842, 14,327 tons.			
1838	13,004	1840	15,203
1839	13,328	1841	16,013
1842	13,328	1843	16,013

Average of four years, since 1842, 17,594 tons.			
1844	17,777	1845	18,039
1846	18,412	1847	17,518

It appears, then, that there has been an increase of 63 per cent. on imports, and 22 per cent. on exports, since the change of system, which the petitioners call pernicious to the foreign trade. Now, for the case of the manufacturers.

But first let me ask them, who is to have the benefit of the removal of the duty, if it should occur? The manufacturers say that they shall have their copper cheaper; but this is by no means the intention of another class of the petitioners; and there is a third class, who even go so far as to advocate the removal of the duty as a preservative against a reduction of the price of copper. For they say, that "smelting copper ores abroad would produce much competition, and thereby the price of copper would be diminished to the British miner." But what say the capitalists in foreign mines? At a late meeting of the adventurers in the Cobro Mines, the directors apologized for making no dividend, on the ground that the duty ran away with all their profits, to the amount of 12,000, or 15,000, which sum they should have divided if the duty had been removed. It will strike your lordship at once, that if the directors contemplated a reduction of price, they benefited? Surely these parties should settle their disputed claims out of doors, before they come into your lordship's presence, or they must expect to hear you say, "Gentlemen, take a shell a-piece, and let the Chancellor of the Exchequer have the oyster in the shape of revenue, of which he has great need."

But, in truth, the manufacturers have nothing to complain of as to the price of their copper. They have it cheaper and with greater convenience than the foreign manufacturer; for it is always at hand and comes to them uncharged with the freight, which the foreigner pays. This is the complaint in 1847; and let it be remembered that in 1842, the foreigner paid 10s. per ton more than the Frenchman, for the same copper, sold by the same merchant. There is no doubt of this fact, and it makes the fairness of the manufacturers for the bonding system quite inexplicable.

The following table shows the average prices of copper from 1827, when the bonding system commenced, to the year 1842, when it ceased, and from thence to the present time. The figures down to 1835, inclusive, are taken from Tooke's prices, and afterwards from the prices paid for copper in the dockyards:—

Average under the Bonding System, 93l. 2s. per ton.			
1827	100 0 0	1835	94 0 0
1828	100 0 0	1836	95 0 0
1829	103 0 0	1837	95 0 0
1830	103 0 0	1838	95 0 0
1831	103 0 0	1839	95 0 0
1832	103 0 0	1840	97 10 0
1833	103 0 0	1841	102 0 0
1834	103 0 0	1842	102 10 0

Average under the Tariff, 94l. 12s. 6d.			
1843	92 10 0	1845	83 12 0
1844	83 7 0	1846	89 1 0

(To be concluded in next week's Mining Journal.)

THE IRON TRADE OF SOUTH WALES.

It was stated by the late Mr. David Mushet, in his valuable work, entitled *Papers on Iron and Steel*, that in the year 1730, there were only 59 furnaces in all England—the annual aggregate make of which was 17,350 tons annually, or little more than five tons a week of pig-iron from each furnace. In the month of March, 1847, a single furnace—the Cwmbech—produced 150 tons of cold-blast iron; and the annual value of the iron produced throughout Great Britain must exceed 9,000,000. sterling. In 1806, the quantity of British iron made amounted to 258,000 tons; in 1844, it was 1,400,000 tons—since which there has been a large increase.

Perhaps the greatest progress has been made in South Wales, the mineral basin of which offers very great facilities for the manufacture of iron or copper, from the abundance and thickness of coal and iron ore. Until a comparatively recent period, the iron trade has been chiefly confined to the districts connected with the ports of Cardiff and Newport, but two new fields have been opened to the westward—1. In the group of mountains to the south-west of Merthyr, the outlets of which are Porthcawl, Port Talbot, and Neath; and 2. the Swansea, Annan and Gwendraeth Valleys, the outlets of which are Swansea and Burry Port. In the first of these groups blackband ironstone exists to a great extent, by which iron can be produced at a much diminished cost; and coal is so abundant that the value of Cwm Avon, 25 years ago, having been proved, which give an aggregate thickness of upwards of 72 ft. of that mineral.

The discovery of blackband ironstone, in South Wales, and that made in 1836 by the late Mr. George Crane, relative to smelting with anthracite coal, have exercised a most important influence on the prosperity of the country. Mr. Mushet—formerly of the Calder Iron-works, near Glasgow—was the first discoverer of blackband, the ironstone of which is much more easily reducible than the ordinary ironstone, and requires less fuel. We learn, from the *South Wales Mercury*, that the ironstone of the Cwmbech, near W. Alexander, has been increased 12,000, or 14,000, for black-band ironstone (formerly called white coal), where not one single shilling of mineral rent was formerly received. This is one instance. The existence of blackband in Wales was unsuspected until within the last five or six years, when Mr. Mushet had again the honour to be its discoverer. It does not exist in some of the great districts of the South Wales mineral basin. We were favoured in March last by our lamented friend, Mr. Mushet, with a communication on the subject, of which the following is the substance:—

"The blackband has been found in South Wales, particularly in the Cwm Avon, Maesteg, the Garth, Tondra, &c., appears much higher in the coal seams than the Scotch, which, correctly considered, may form a portion of the principal part of the coal measures; whereas, the Glamorgan is found in or near the Cocksack rocks and strong Silurian grit rocks, at a considerable distance above the principal seams of coal, and even above the upper ranks of ironstone. Near Pontypool the Cocksack rocks occupy a range considerable higher than the Blackpits (beds of ore), and these, again, are found at a considerable distance above the Cocksack rocks. In Cwm Avon and Maesteg, I think that one bed is above, and one below the two Cocksack rocks; one, black, compact, and clean, the other mixed with shale, which to a certain extent is detected by burning; the thickness—viz., 14 and 16 in., being nearly alike to the Scotch, though, when roasted, the yield in iron is less. There is a bed of clay ironstone which overlies one of the beds; it is, I think, 12 or 18 ft. thick, and averages from 10 to 12 per cent. weight, though poor, is yet a curious and valuable deposit. The neighbourhood now resembles the blackband, but is largely covered during the iron trade, as the extent of blackband is great, and the supply of coal fully in proportion."

The produce of iron in South Wales amounted in 1838 to 979,513 tons; in 1836, to 354,919 tons. We are unable to give precisely the amount of exports for the year 1846; but the following returns, which closely approximate to the actual amount, show a prodigious increase in the make of iron:—Exports of iron at Newport, in 1846, 215,014 tons; in 1845, 222,491; Porthcawl, in 1846, 25,554; Neath, in 1846, 5700; Swansea, in 1846, about 28,000; Burry Port, 1846, 1729; total, 498,517 tons.

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Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—The flat-rod shaft, sinking under the 28 fm. level, is without alteration. The 18 fm. level and west, on main lode, is at present worth about 182 per fm.—its underlay 1 ft. in a fm. north; the winze sinking in the bottom of the 18 fm. level, behind this end, is at present producing stones of ore, but no regular lode; the slide has caused a great irregularity in it, although we have it still going down on the south side of the slide. The 13 fm. level is at present rather poor; the lode is divided into small branches. A rise from the 18 to the 12 fm. level, to hole as far west as the 12 fm. level end, looks well—worth about 207 per fm. The winze sinking under the 18 fm. level, on middle lode, is still poor, keeping its regular course down; the western slope, on middle lode, is worth from 144 to 161 per fm.; the eastern slope is got into very broken unstratified ground, and producing very little ore. The adit end east at present is not on the lode; we are keeping it a little to the north, to hole to new surface-shaft for air, and to expedite the drawing, &c. At Clon Mines, the men are still employed in costeaning, without any discovery. The 18 fm. level end will be into Clon Mines set in less than 30 fms., at the present course the lode is taking.—T. ANGOVE & G. WHITE.

BEDFORD UNITED.—At Wheal Marquis, the lode in the sump winze (now 6 fms. 4 ft. 6 in. under the 80 fm. level) is 9 ft. wide, and worth 864 per fm.; in this level east the lode is 3 ft. wide, and still worth 207 per fm.; in the stopes, in the back of this level, the lode is 3 ft. wide, and worth 257 per fm. The lode in the 70 fm. level east is 2 ft. wide, composed of spar, mudic, and ore; the lode in the winze, in this level, is 2 ft. wide, producing good stones of ore. There has been no lode taken down in the 58 fm. level east. At Liscombe, the lode in the adit level east is 3 ft. wide, composed of spar and mudic, with good stones of ore; and in the rise, in this level, the lode is 2 ft. wide, producing good stones of ore. The north engine-shaft is 5 fms. 2 ft. below the plat; the lode is 2 ft. wide—ore, mudic, and spar. The adit level east is without alteration.—JAMES PHILLIPS: July 6.

CALLINGTON.—The lode in the 125 fm. level south is 8 in. wide, and worth 207 per fm.; in the north end we are opening tribute ground. In the 112 fm. level south the lode continues large, intermixed with silver-lead ore. In the 100 fm. level south no lode has been taken down; in the north end the lode continues productive—the backs will work at a moderate tribute. In the 90 fm. level north no lode has been taken down; in the winze, sinking below this level, south of the shaft, the ground is favourable—this winze being on a cross-course, we are only carrying the wall of the lode; we expect to communicate with the level below in the course of next week. At the north mine, the lode in the 100 south continues productive, the back will work at a low tribute; in the north end, the lode in the 100 south continues productive, the back will work at a low tribute; in the north end the lode is small, producing silver-lead ore. No alteration in the 90 or 80 fm. levels south. In the 70 east we are now in the great cross-course. At Kelly Bray, the engine-shaft is nearly 25 fms. deep, and we have commenced cutting plat, previous to driving a cross-cut; the lode in the shaft, on its course, is 4 ft. wide, of the same promising character.—J. T. PHILLIPS: June 28.

CARMARTHEN CONSOLS.—Our operations have been chiefly confined to clearing the old workings at Glantwymon on two of the north and south lodes, where we find they have been extensively wrought from the surface down to the water level, and in the arches of ground left we trace proofs of abundant returns of lead. We have cleared the old deep adit for several fathoms, in hopes of coming into whole ground, but found it all worked away above and below the adit, and full of water; we have, therefore, commenced a new and deeper adit, which will come under, and unwater the whole workings. I have set it to drive at 17 per fm. After driving about 30 fms. we shall come under an old shaft, which it will be well to secure, and continue on the course of the lode. It will then be sunk in what has been the most productive ground, and close to the water-power. This is now the driest time of the year; yet I find there is water enough flowing through our set to keep the water, with a 40-ft. wheel, from 30 to 40 fms. deep. I expect the adit will be up to this place in about two months, during which time we shall prepare the shaft for sinking. It will then be advisable to erect the engine-wheel, and I feel assured, that from the time we begin to sink, we shall have a cheaply-worked and profitable mine. At Nant, we have driven the new shallow adit 10 fms.; the lode is about 5 ft. wide, composed of gossan and barytes, but it is too shallow to expect much lead; and as the old shallow adit will come upwards of 20 fms. under this, I do not think it prudent to continue it further; I do not see anything can be done on this part of the set advantageously until a whim is erected, and the shallow adit cleared; and soon as this is done, the barytes may be returned also.—T. WILLIAMS.

COATLITH HILLS.—The level, east from A shaft, has been driven about 3 ft. during this week, the vein is much the same as when I last wrote. The horse level has been driven about 1 fm. during this week.—J. M. PAUL.

COOK'S KITCHEN.—On Chapple's lode, in the engine-shaft sinking under the 180 fm. level, the lode is large, and producing a little tin—the ground hard. In the 180 fm. level west, the part of the lode on which we are driving is about 4 ft. wide, and worth from 64 to 71 per fm.; in the same level east, the lode has improved, and the part we are now driving on is 4 ft. wide, and worth from 107 to 121 per fm. In the 170 fm. level east, the part of the lode on which we are now driving is 4 ft. wide, and worth about 52 per fm.; in the same level west, the part of the lode on which we are driving is 4 ft. wide, and worth from 52 to 62 per fm. In the 160 fm. level west, there is an improvement, and the part of the lode on which we are driving is worth 357 per fm. At New east shaft, we have commenced sinking under the 160 fm. level, in a kindly lode, producing stones of tin and copper ore, and worth about 82 per fm. In the 92 fm. level west, on Eudy's lode, the end is worth about 42 per fm. In driving north, through North Tincroft lode, we have not yet cut the north wall. On the Druid lode, we have experienced some delay in clearing the adit westward, from a slight run having taken place, which has, however, been got through. The tribute department continues much the same as usual.—JOS. VIVIAN: July 5.

CUBERT SILVER-LEAD.—In consequence of having a breakage in our pitwork this week, we have not done so much in sinking the engine-shaft, nor driving the 35 fm. level; of course, the appearances there are much the same as reported last week, neither do I see any alteration in the other parts of the mine, excepting that the 25 fm. level, going east, is improved; the lode there is 2 ft. wide, and will produce a ton of lead ore per fm. (at present). We have, this day, shipped the computed 60 tons (21 cwt.) of silver-lead ore, sold (at the mining offices, 8, George-yard, Lombard-street, London, on Saturday, June 19) to Messrs. Walker, Parker, and Co., Chester.—R. ROWE.

DARTMOOR CONSOLS.—I have this day been underground; as we had a run, I assisted the men in securing it; and, as soon as the water was let down, so as to make an entrance east from Henry's shaft, I took two men, and presented east to the next whim-shaft, where we found the adit to be quite clear as if we had been here employed, instead of being idle for years; we then started east as far as the new engine-shaft—that is where the large lift of pumps are above the mansion-house; here I find the old leaders, timber, and rubbish, to have filled the bottom of the shaft; again I proceeded with my little party to the old engine-shaft, or the first whim, on the top of the hill, where I find some timber wanted, but of no great quantity; and, lastly, I went up to near Henry's engine-shaft, which is not 100 fms. from our object in view, Pryse Deacon's shaft, where I find the back of the level to have given way, and the water is coming through the fill of rubbish, but this is only trifling. We may now say, our adit is all but clear from the tail to near Pryse Deacon's shaft, which is upwards of 600 fms., and that without any serious expense. As we have been so fortunate with the adits, we shall I hope be in readiness for the engine in eight or nine weeks, excepting the repairs in the shaft; and as the weather is so fine, it will not be long rebuilding; I am positive we shall soon complete the adit.—T. GREGORY: July 5.

DEVON AND COURTENAY CONSOLS.—The end driving west on South lode, at the 80 fm. level, is looking very promising; the lode is 3 ft. wide, composed of spar, peach, and mudic, and producing good stones of copper ore. The end driving east, on the same lode, is also looking very promising; the lode is 5 ft. wide, composed of spar, mudic, and peach, and producing good stones of copper ore. In the deep adit, on South lode, the lode is about 2 ft. 6 in. wide, composed of mudic, spar, kyllas, and copper ore. In the shallow adit, on North lode, the lode is about 2 ft. wide, composed of spar, mudic, and lead ore.—EDWARD NORTHEY: July 6.

ELBOROUGH.—The lode in the 16 fm. level, east of Vivian's shaft, is 10 inches wide, composed of flookan and spar, intermingled with lead. The lode in Vivian's shaft is much larger than I have hitherto seen it; it is 9 ft. wide, composed of a light-blue coloured flookan and spar, and frequently good stones of lead. The best work we had saved in sinking this shaft, has been dressed and sold. I have this week set the course work to dress, at 10s. in the 12—R. TREVITHICK: July 7.

EAST CROWDALE.—The ground in our engine-shaft is changed a little for the better—it is composed of blue kyllas, with branches of spar, containing mudic and spots of ore, down 38 fms. 9 ft. 4 in. The ground in the adit level, towards the Six Hill lode, is very much improved the last week—it is composed of a soft kyllas on the south side, and kyllas, with small branches of spar, on the north side—is now driven 41 fms. 5 ft. Our engine and pitwork is in good order.—S. PAUL: July 3.

EAST TAMAR CONSOLS.—We have commenced driving the 54 fm. level from Harrison's shaft; the lode in the north level is 2 ft. wide, producing some good stones of silver-lead ore. The lode in the 54 south is 2 ft. wide, saving work. The lode in the 46 north is 18 in. wide, work of a coarse quality; the lode in the 46 south is 18 in. wide, work of a good quality. The lode in the 30 fm. level south is 20 in. wide, fluor-spar and silver-lead ore—a very promising lode. Charlotte's is much the same as last reported only the air is very

foul in this part of the mine—so that we have commenced clearing up Church Lane shaft, to ventilate the same, and open ground that will set at a moderate tribute. Our dressing-floors are full of work—for want of water we are thrown back in the dressing of it; I expected to have Whiston water by this time, but it will take until to-morrow to bring it in, which will be a sufficient supply for all our dressing department.—B. BONNIE: July 6.

GREAT MICHELL CONSOLS.—In the 35 fm. level, both east and west, the lode is composed of spar, mudic, fluor, and stones of ore. In the winze sinking below the 22, west of the engine-shaft, the lode is producing good stones of ore.—T. RICHARDS: July 6.

GREAT WHEAL MARTHA.—The cross-out is now driven 18 fms., and the ground still favourable. I stated in my last that we had more water issuing from the end, and I thought we were not far from the lode; but this proved to be a branch about 4 in. thick, composed of spar and spots of mudic, and underlaying about 4 ft. in a fm. We cut through a branch in cross-cutting in the 10 fm. level, which went through Thomas's shaft about 4 fms. above the 20, and which I have no doubt is the same we have now met with; and, as it is now certain the lode does not underlay so fast as we expected, we may have several fathoms more to drive. Our new 40 fm. plunger lift is now completed, and working very well. We have still two men costeaning at Sherrill's; but have not yet cut any other lode.—T. PENALUNA: July 3.

GUNNIS LAKE.—At Chilworth, Bailey's engine-shaft is 10 fms. under the 12 fm. level; the lode therein is 3 ft. wide, producing good stones of yellow, grey, and black ore—a very promising lode; in the same level west, we are still driving north.—W. RICHARDS: July 6.

HAWKMOOR.—The lode in the 15 fm. level, east of Hitchins's shaft, is 3 ft. wide, and unproductive.—P. RICHARDS: July 6.

HEIGSTON DOWN CONSOLS.—The lode in the 20 fm. level, east of North shaft, is 2 ft. wide, producing some good work; in this level west, the lode is 3 ft. wide, composed of spar, peach, and tin—very kindly. We are still engaged clearing Buddie's adit.—W. RICHARDS: July 6.

HOLMBUSH.—The diagonal shaft is sunk 6 fms. 4 ft. below the 120 fm. level, and is again set to sink by 8 men at 207 per fm., "extent for the month"; the ground is still favourable, and the branches continue their regular course, and are composed of spar, mudic, and stones of ore. The lode in the 120 fm. level, east of Hitchen's shaft (on the north part), is 14 in. wide, principally mudic, with spots of copper. The lode in the 110 fm. level south is 2 ft. wide, composed of soft spar and stones of lead—this level is for the present suspended, and the men set to rise above the back of the level, to get at the same sort of lead we had in the 100 fm. level, and to ventilate and lay it open for tribute ground. The lode in the 100 fm. level south is 3 ft. wide, composed of hard spar and stones of lead, saving work; the rise, above this level, is communicated to the 90 fm. level, and we have set two new pitches on each end of the rise. The 90 fm. level south is for the present suspended, until the tributaries have stopped sufficient ground below the bottom of the level, that no obstacles shall be thrown in their way.—W. LEAN.

ILAM.—The lode in the 42 fm. level, west of Robins's shaft, is a kindly lode with copper in places. In the 67 fm. level, east of the shaft, the lode is looking just the same; in the 67 fm. level west, driving towards Brown's shaft, the lode is not looking so well as when I wrote last, owing to a hard bar of ground cut in driving; but it appears at this time the ground is altering fast, and is becoming more congenial for copper.—J. SPRAGUE: July 7.

KIRKCUDBRIGHTSHIRE.—The lode in the end west, at the 40 fm. level, is 4 ft. wide, producing about a half ton per fm. of lead. The lode in the 30 west is 4 ft. wide, yielding a half ton per fm.; the stopes in the backs of this level look pretty well—worth about 104 to 122 per fm. The end driving east on the center is large and kindly, but unproductive. The end west at the 20 fm. level, is looking well—worth 157 per fm. The rise on the junction (not holed) is producing about 1 ton per fm. We are preparing to resume sinking Stewart's shaft, with as much speed as possible. We expect to ship our last month's ore on Monday next.—JOS. BUZZO: July 3.

LEWIS.—Our prospects in the 60 fm. level are much the same as when last reported; but in the 50 east we have driven north 3 ft. into that part of the lode we left, where we have found some very good work for tin; all other places are much the same as when I reported to you last week. With respect to the tributaries, we will certainly attend to your request in stopping them immediately after their present take is expired. Præd's shaft we have set to sink, and will get on with it as fast as possible. With respect to the sale of tin, Capt. Paul has promised me to give you every information respecting it.—S. S. NOBLE: July 3.

MENDIP HILLS.—The lode in the winze, sinking below the 38 fm. level, continues about 3 ft. 6 in. wide, composed of quartz, limestone, and soft spar, intermixed with small cubes of lead; we have at present a large stream of water issuing from the bottom of this winze; in the 38 fm. level, north of the shaft, the lode is much larger than the end is wide, principally composed of dark flookan, spar, and small particles of lead—ground favourable for driving. In the slag department, our progress during the past week has been favourable; we have a large piece of slag already uncovered, and the lode from which the rubbish is now being removed, continues to look well; the carpenters are still engaged making launders as fast as possible.—F. C. HARTUP: July 5.

SNOWDON AND DALAWIN COPPER MINES.—Your letter of the 27th I have received; and, in answer to your inquiry as to the produce of the Dalawin Copper Mine, the ore, if properly dressed, would produce, on an average, from 10 to 11 per cent.; the net cash depends upon the standard—but taking it as it has been for some years back, we may reckon on 71.10s. to 82. per ton clear of expenses, so far as regards carriage, shipping, and smelting. With respect to the quantity that can be raised, I have no hesitation in saying, that by sinking the engine-shaft, which is within 1 yard of the lode (and only about 25 yards from the surface), to the depth of 40 yards, from 15 tons to 20 tons a week can be raised with about 14 miners; and by driving east and west on the lode, to open the ground, so as to put more hands to work, it is my opinion that double the quantity would be raised. The copper at the bottoms varies from 10 to 18 in. of solid ore, with mixture on each side; but at the junction of the two veins, which meet in the bottom sump, the lode is at least 12 ft. wide. The lode going south we have not had time to do much to at present, but there are beautiful specimens of both black and yellow ore. Mr. Treweeke, the Marquis of Anglesea's agent at the smelting-works, is writing to me constantly for ore, and I understand the ore from the Dalawin Mine is quite superior to any ore they meet with, and they are making upwards of 20 tons of fine copper weekly; I enclose you one of his notes I received the other day. The only thing to complete the quantity of ore that is in the old hillocks, and the quantity from the same is enormous. The stamps would produce about 6 to 8 tons weekly, and will dress to a higher per centage than any sample we have had assayed; and I should advise to dress it about the same as the other to prevent any loss, and one sample from the mine would be sufficient. I have no doubt but Sir Richard Bulkeley's agent, Capt. Dyer, of the Parys Copper Mine, would give his report also at any time, and confirm my opinion.—G. TWIGGS: Brynbellia, North Wales, June 29.

SOUTH TAMAR UNITED.—The men in the engine-shaft have had great difficulty in getting down the lift, being interrupted by timber and rubbish being across the shaft, so that we have only forked 9 ft. since last report; I hope they will soon get through this difficulty. The men in the adit level are getting on very satisfactorily in clearing and securing the same.—B. BONNIE.

SOUTH WHEAL TRELAUNEY.—Snell's engine-shaft is in course of sinking with 9 men—ground just the same as last mentioned, composed of white kyllas, mixed with mudic and prish heads, and spots of copper ore—water a little quicker. On Sobey's lode, the adit is still driving—lode about 2 ft. wide, composed of gossan and brights, and white kyllas. The cross-cut, west of engine-shaft, is still driving at the adit level, expecting to have a communication through the adit in the course of a few days.—W. JESKIN: July 5.

TAMAR SILVER-LEAD.—In the 160 fm. level end, south of the shaft, the lode is 2 ft. wide, composed of capel, spar, and ore, saving work; in the same level, north of ditto, the lode is 18 in. wide, good stamp-work. In the 145 end south the lode is 6 in. wide, unproductive; in the winze, sinking in the bottom of this level, the lode is 18 in. wide, work of a coarse quality; in the 145 end north the lode is 2 ft. wide, composed of capel and ore—a promising end. In the 135 end south the lode is 3 ft. wide, producing a small quantity of ore; in the winze, sinking below this level, the lode is 1 ft. wide, saving work, but not rich. In the 125 end the lode is 1 ft. wide, 6 in. of which is rich work. At North Tamar, in the 70 fm. level, the lode is still small and poor. In the 60 fm. level the lode is 6 in. wide, producing good stones of ore. We sampled, on Saturday, the 8d inst., computed 57 tons of rich silver-lead ore.—JAMES SPRAGUE: July 5.

TINCROFT.—The lode in the 100 fm. level east, in the north mine, is 20 in. wide, kindly, though producing but a small quantity of ore; the lode in the west end, same level, is disordered and unproductive. The lode in the 90 east is 12 in. wide, very much improved since last report. The lode in the 80 east is 20 in. wide, yielding some tinstuff; the lode in the 80 west is 15 in. wide, producing some good quality ore, worth 157 per fm. The lode in the 60 west is 15 in. wide, producing some ore, and promising. The lode in the 50 west is 20 in. wide, worth 157 per fm. At Palmer's, in the 80 fm. level we have a good branch of ore on the south part of East Pool lode; we shall cut into the north lode. The lode in the 70 west is 12 in. wide, ore, but not rich; the lode in the winze beyond this end, in the bottom of the 60, is 4 ft. wide, producing 2 tons of ore per fm., worth about 67 per ton; another winze, to the west of the last-named, is being sunk at 4s. 6d. in the 12 tributes. The lode in the 36 west, south lode, is 15 in. wide, producing some ore, and kindly. The ground is still hard in the adit level, driving towards Stansby's shaft; at the Wheal Providence part we are getting on very well clearing the adit; we find some rich quality ore on the Druid lode, in the back of the adit; I shall be able to set

some tribute on it in a short time. We continue to raise fair quality tinstuff from the different levels and pitches. In the south mine, Chapple's lode is still looking well in the pitches, and the levels are producing some ore.—W. PAUL.

TIN VALE CONSOLS.—We are getting on with the open cutting through the large main; I expect we shall be all right by the end of next week to commence driving the adit level close, in order to cut the great tin and copper lode, the men are getting on with the greatest propriety; I have also to inform you, that we are costeaning further north near the plantation, and have cut a copper lode 1 ft. 3 in. wide; the lode is composed of felspar, mica, red gossan, and some spots of yellow copper ore, in a beautiful white granite strata. I think there is no doubt of the adventurers having a good and productive copper mine in the eastern part of this set.—JOHN FLOYD: July 3.

UNITED HILLS.—The water has been in the 90 fm. level since our last report, in consequence of the main pin of the angle bob underground breaking, by which means the engine was stopped 18 hours. In the 80 fm. level there has been nothing done in the end during the past week, in consequence of the water. In the 70 fm. level the lode is 2 ft. wide, worth 71 per fm. The 60 fm. level has been suspended since August last. The shallow adit has been suspended since last survey-day. At Wheal Charles, in the 50 fm. level the lode is 2 ft. wide, unproductive. At Wheal Sparrow, in the 40 fm. level the lode is 2 ft. wide, worth 82 per fm. In the 30 fm. level end no lode broken for the past week; the lode in the stopes is 6 ft. wide, and worth 147 per fm. The winze in the 30 fm. level is communicated to the 30 fm. level; the men are now engaged driving west of Turner's.—T. TREVENEN; R. WILLIAMS: July 6.

WEST WHEAL JEWELL.—In the 115 fm. level east, on Wheal Jewell lode, the lode is 15 in. wide, composed of spar, mudic, and stones of ore—drove last month 2 fms. In the 100 fm. level west, on same lode, the lode is 2 ft. wide, composed of spar, mudic, and can, with a branch of ore; the north side of the lode is worth 32 per fm.—drove 1 fm. 3 ft. In the winze in the bottom of the 85 fm. level, on the same lode, the lode is 2 ft. wide, producing half a ton of ore per fm.—sunk last month 1 fm. 2 ft. In the 70, west of Williams's cross-course, on the same lode, the lode is 9 in. wide, producing a little ore—drove 1 ft.; these men have been clearing and securing a run in the flookan winze in the past month. In the 30 west, on Tolcarne tin lode, the lode is 1 ft. wide, worth 64 per fm.—drove last month 2 fms. 3 ft. 6 in. In the 12 fm. level west, on same lode, the lode is 18 in. wide, worth 52 per fm.—drove 1 fm. 3 ft. 6 in. In the stopes, east of Quarry shaft, on same lode, the lode is 4 ft. wide, worth 222 per fm.—stopped last month 3 ft.—drove east, same level, 2 fms. 4 ft. 6 in. The stopes in the bottom of the deep adit, on same lode, east of Pryor's winze, is worth 207 per fm.—stopped last month 6 fms. In the 12 fm. level, east of Rowe's winze, on same lode, the lode is 9 in. wide, worth 47 per fm.—drove last month 2 fms. 5 ft.—R. JONES; T. BRAY: July 5.

WEST WHEAL MARIA.—The eastern engine-shaft is down 37 fms. 2 ft. 6 in.; the lode in this shaft is about 4 ft. wide, 15 in. of the north part of which is without important alteration, producing good stones of ore. The western engine-shaft is down below the 54 fm. level 7 fms. 2 ft.; the lode in this shaft is about 2 ft. wide, composed chiefly of capel, spar, mudic, and spots of ore in places. In the 54 fm. level, east of this shaft, the lode is 18 in. wide, producing occasionally spots of ore. In the cross-cut, south at this level, there is no important alteration.—THOS. RONDA: July 6.

WHEAL ADAMS.—We have cleared and secured the engine-shaft to the 50 fm. level, below which it is apparently in a perfect state. We have also removed the stuff from and timbered the 50 plat, and cleared the level for several fathoms in length, and we hope soon to reach the productive ground which was being wrought on when the accident occurred. The arch of ground in the bottom of the 40 is removed, and the men are at present stopping the lode south of the winze, where there is a good course of lead; the winze sunk in this level, to the south of Tonkings's pitch, is for the present suspended. The lode is no doubt hove to the east, and might be easily discovered at the 50, at a low cost. The black flookan vein has not had the effect of dividing the western silver-lead lode, by which it is repulsed, and the latter is found regular, with well defined walls, and promising indications. The bearing of the veins in the cross-cut at the 28, and their composition by analysis not having corresponded with those of the western silver-lead lode, we resumed driving the cross-cut, and having extended it about 2 fms. further west, we have intersected the lode, which is about 2 ft. wide, consisting of friable quartz with granular galena, and fragments of antimonial sulphure of lead—a very kindly end, which we propose at once driving south. The ground in the northernmost cross-cut is a little harder than usual, and does not at present look so promising to produce lead; I am, however, still sanguine that the north unwrought ground is the best part of the set, and is worthy of a more extensive development. The rise in the 18 fm. level has again reached whole ground, in which the lode is 2 ft. wide, consisting mostly of gossan, accompanied by fragments of mudic and black oxide of copper. Men are engaged in removing stuff from the old engine-house for the lode, which will be commenced building to-morrow; in the meantime, we have cleared and repaired the boiler, built the flues, and accomplished other important work in connection with the engine. We are in course of dressing another parcel of lead, and hope to be in a position to commence raising the light brown jack, to fulfil the contract, in the course of a fortnight.—J. FRENCH: July 6.

WHEAL SOPHIA.—The lode in the adit level is still improving—having many spots of ore. The ground in Boudry's shaft is changing from 164 to 122 per fm. We hope soon to get down with this shaft to the adit level, after which we may expect a quantity of ore.—H. LUKE: July 1.

FOREIGN MINES.

BOLANOS MINES.—SAN RAFAEL AND CELESTINA.—May 17.—I am just advised, that in the 4th cross-cut, in San Rafael (San Francisco de Paula), the workmen have broken into large "vaga," as they suppose, which has produced a rush of water, filling the shaft 71 yards above the cross-cut; I have, in consequence, sent for 60 horses from the country, to put the other whim to work immediately, by which I hope in a few days to reduce the water, and be able to resume this interesting work. The hardness of the ground, the great number of vaga, and the quantity of water streaming from them, has hitherto impeded our progress; but I trust we may experience some relief from this sudden drawing off the water. In the workings on ore, as well in this mine as in Celestina, there has been no improvement.

EL BOTE.—May 18.—Since my last, the extraction of ores has continued nearly in the same points as I then mentioned. The workings in the eastern level of Guadalupe falling off in quality, it was found necessary to stop them; and, in order to keep up the extraction of cargo, a new winze was opened in the west level of Guadalupe, between the Foro de Guila and the Plan No. 1. This point is at present giving very good ore, as well as the other two winzes. The communication between the level of Concordia and the rise of San Antonio, has been made, and the workmen are at present cutting through the vein, which, although wide, is in poor ore; but, no doubt, these will improve as soon as the working reaches the ends of San Antonio. I am sorry to say, that no improvement has taken place in the east end of Guadalupe. In the west end of Guadalupe, within the last week, the vein has widened out, but the ore at present extracted are not so good as they were when the lode was not so wide. A rise has been opened near the end, which, at present is giving very good ore, and thus enables us to form workings in this part of the mine.

SHAFT OF SAN FERNANDO.—On the 3d of this month, the new cross-cut at 140 varas, called Cracero de la Compania, was opened; and, as yet, the progress in this work has been slow, on account of cutting through the small veins of quartz that have passed from the shaft to the north, and thus yielding a large quantity of water; although this at present throws us back, it may for the future be of great service in sinking the shaft; as, by making a small winze at the mouth of the cross-cut, the water may be collected there, and thus leave the shaft free from this body of water. As soon as the new cross-cut is 5 varas long, the sinking of the shaft will be resumed.

SHAFT OF SAN GERARDO.—The sinking of this shaft continues well, as you will observe by the statements, but the ground still requires timbering. The accounts enclosed will enable you to form a judgment of the progress made in the negotiation in the month of April; and, if no unforeseen circumstance takes place, it is to be hoped that the profits of this month will fully come up to those of April. The enclosed statement will inform you of the results of the first three weeks of this month. On account of fast days, and militia musters, the extraction of ore fell off a little the two first weeks; but, as there are no more fast-days to the end of the month, I fully expect that the extraction will be kept up to the 3000 cargo weekly.

Statement showing the General Results of the Mines and Haciendas in the Zacatecas District in April, 1847.—

Mines.	Profit.	Loss.
San Rafael	\$ 250 2 6	\$1045 7 7
Celestina	290 0 0	—
Malamosche	—	40 0 0
Loroto	—	—
Haciendas	1181 0 6	—
.....	\$1661 2 4	\$1085 7 7
Deduct loss	1085 7 7	—
Net profit	\$ 575 3 3	—
El Bote Mine—profit in April	\$15,220 7 7	—

COPIAPO MINES.—Copiapo, April 26.—Chico Copper Mine.—Since my last, we have commenced driving a 15 fm. level to the east of Harman's shaft, on a vein about 10 fms. to the north of the main lode, and have discovered a pretty little bunch of rich ore, about 14 in. wide, and not less than 30 per cent; we have driven only 9 fms. since we cut the east, and have extracted upwards of 6 tons. We have about 160 fms. of ground to the east that has never been explored; I am, therefore, in great hopes that this new shoot of ore will continue for some considerable length, as it runs nearly parallel with the main lode, that has given so abundantly. We have commenced stoping some of the new ground in the back of the 37 fm. level, to the east of the Victoria shaft, which promises to yield well for several months; the vein is about 18 in. wide, 9 of which is very good ore, and the remaining part will nearly all pay well for washing and jigging at Malpaso. The stopes to the east of Harman's shaft continue to produce some very good ore, but in small quantities, the vein being only 6 in. wide, and the ground hard. In the western part of the mine, where we are sinking on the gossan, it presents a beautiful appearance—vein 4 ft. wide, and producing some stones of rich ore. I fully believe it will not be long ere we see a great improvement in this part of the mine; and, on the whole, I consider our prospects here, as regards the future, are much brighter than a month since.

San Pedro Copper Mine.—We expect shortly to cut the vein where it has been holed. In the last run that has been driven exhibits some very good rich spots of ore, which, in my opinion, is a good sign, that we are nearing the lode, and that it continues rich, as it was previous to its being delocated. The 24 fm. level westwards producing some good ore, but not quite so clean and free from earthy matter as it was last month; but this ore can easily be concentrated, it being yonderous, while the poorer parts are a combination

an important place in the general formation of the lode; all work has been suspended for the present in the advanced part of the level.

EAST POOL.—At a meeting of adventurers, held at the mine, on the 15th June, the accounts—showing amount received by sale of tin and copper ores, 3382 8s. 6d., and balance against the mine of 1241 9s. 5d.—having been examined, were allowed. The thanks of the meeting were voted to Lady Bassett, for continuing her dues at the reduced rate of 1-30th; and Mr. A. Richards to be paid 5l. 5s. per month, as clerk of the mine.

EAST WHEAL ROSE.—The following is a statement of the accounts presented to the shareholders on the 7th inst.:—To costs for March, 22482 12s. 7d.; for April, with sundries for the two months, 34892 1s. 10d.; merchants' bills, 18882 7s. 11d.; lords' dues, 13042 19s. 7d.; law expenses, 1782 18s. 2d.; North Wheal Rose purchase, 23512 13s. 4d.; dividends, 76802; expenses of Metha sett, 1461 4s. 3d.; together, 19,2762 17s. 8d.—By balance from last account, 27022 8s. 5d.; ores sold, 19,9712 14s. 6d.; Cargill adventurers, for supplies, water charge, agency, &c., 1822 11s. 8d.—22,8562 15s. 5d.; leaving a balance in favour of the adventurers of 85792 17s. 9d.

GONAMENNA.—At a meeting of adventurers, held at Liskeard, on the 30th June, the accounts—showing labour cost for March and April, 8444 12s. 4d.; for materials, 1692 13s. 9d.; leaving balance against adventurers, 1062 4s. 9d.—having been examined, were passed, and a call of 2l. per share made. The following report, from Capt. J. Buzza, was read to the meeting:—"We expect to hole the mine from the 20 to the 34 fm. level in a few days, and then commence stopping the back over the 34. We broke about 10 tons of ore in the bunch mentioned in last report, which held about 7 fms. in length; we have about 14 tons of ore dressed up, and hope to raise more, to make a parcel for sale from the stopes in the back of this level. The east end in the 34, on the north lode, is 9 in. big, composed of spar and peach; the bridge lode, in the same level east, is 4 in. wide, composed of spar, capel, and a little ore; in the west it is 8 in. big, composed of spar and capel, spotted with ore; we have cut a lode south of the Bridge lode in the same level, from 6 to 8 in. big, and have commenced to drive west on it—it is composed of spar and mundaic; the east heave of the same lode is split into branches, or disordered against the cross-course; the engine-shaft is sunk under the same level 11 fms.; we expected to meet the lode by this time, but have not as yet. In the east adit, driving north, no lode has been cut since the last meeting. We propose driving a 45 fm. level immediately under the ore in the 34, which being there much larger and better than in the 20, we hope there will be a corresponding improvement from the 34 to the 45; the appearances generally of the ore in the 34 were indicative of a good and lasting bunch of ore in depth."

ILAM.—A two-monthly meeting of adventurers was held at the offices, 25, Fleet-street, on Monday, the 5th inst.—CHARLES BISHOP, Esq., in the chair.—A report from Capt. Sprague on the state of the mine, which was considered of a satisfactory nature, was read, but such being in fact only a resumé of the reports which have appeared from time to time in our columns, we deem it unnecessary to insert. The accounts, up to and including May cost, amounting to 4841 6s. 4d., were laid on the table, whereby it appeared that, on the payment of all calls made, and liquidating the balance due to the pursuer, on making up the last balance-sheet of 4782 7s. 4d., there would then remain due to the pursuer 8942 13s. 8d.—the accounts, as submitted, were then passed.—It was resolved, that a call of 20s. per share be made; and, by a resolution passed at a special general meeting, held for that purpose, it was determined that any share or shares, on which the calls due shall not have been paid, on or before the 15th inst., shall be declared absolutely forfeited.—Messrs. Morley, Courtenay, C. Bourdillon, and Crace, were then re-elected as a committee for the forthcoming two months, thanks having been voted to them for their services rendered since the last meeting.

SOUTH WHEAL FRANCIS.—Statement of accounts, presented at a meeting of shareholders on Monday last:—To cost for April and May, 19432 1s. 3d.—By ores sold April 1, 20362 15s.; ditto May 6, 23192 14s. 4d.; by tin sold, 1701 0s. 10d. (less dues, 8012 15s. 4d.) = 42242 14s. 10d.: showing profit of 22812 13s. 7d.: add balance in hand of March, 5782 14s. 6d.; total, 28602 8s. 1d.—Deduct dividend 122 per share, 14882: leaves present balance of 13722 8s. 1d.

SPEARNS CONSOLS.—At a meeting of adventurers, held at St. Just, on the 30th June, the accounts for three months, ending 31st March—showing an expenditure of 15992 0s. 3d., and leaving a balance in favour of the adventurers of 6742 16s. 6d.—having been examined, were allowed and passed, and a dividend of 50s. per share was declared, leaving balance of 3542 16s. 6d. in hand. The accounts showed the amount of tin sold as 42 tons 7 cwt. 1 qr. 13 lbs., producing 20722 9s.—the highest price being 572 per ton.

WEST CARADON.—At a meeting of adventurers, held at Liskeard, on the 29th June, the accounts for March and April—showing receipts, by sales of ores, 46022 9s. 7d.—having been examined, were passed, and a dividend of 5l. per share declared, leaving a balance of 21502 6s. 2d. in hand. The accounts show the following amount of the expenses of the two months—pursuer, agents, and clerks' salaries, 712 4s. 6d.; counting-house expenses, 142 17s. 1d.; engineer and reporting expenses, 792 1s. 6d.; tribute, 10842 5s. 4d.; tutwork, 6442 5s. 2d.

WHEAL FORTESCUE.—A meeting of adventurers was held at the offices, Tavistock, on Monday, the 5th July.—THOMAS PALMER, Esq., in the chair.—The accounts and vouchers for April and May—showing balance in hand, 682 8s. 8d.—having been examined and passed, a report from the captain was read.—The pursuer then stated to the meeting, that he had communicated to Mr. Hitchens a proposal for the Wheal Maria Company's joining the Wheal Fortescue adventurers in the expense of a trial proposed to be given to the Capel Tor lode, and which Mr. Hitchens said, he should be ready to consider with the Wheal Maria adventurers, when it was resolved, that the following gentlemen—viz.: Messrs. John Rundle, R. Taylor, and J. Phillips—be a committee, for the purpose of communicating with Mr. Hitchens hereon; and that they be hereby authorized on behalf of this company to enter into any arrangements with the Wheal Maria adventurers in the matter, as they may think fair and reasonable.—A call of 10s. per share was then made, payable at Tavistock before the 15th inst.—The following is the report, from Capt. S. Secombe and J. Key, read to the meeting:—"The engine-shaft has been sunk since the last meeting 4 fms., making the whole depth from surface 29 fms., or 20 fms. below the adit; in sinking the last 3 fms. the ground became much harder, the killas being intermixed with floors of quartz, and branches or droppers, composed of ore, mundaic, and quartz—in consequence of this change of ground, the driving towards the lode was not commenced so soon as we expected. A cross-cut was commenced to drive north from the bottom of the shaft towards the Wheal Maria lode, and is driven 2 fms. 3 ft.; there is now about 6 fms. more to drive to intersect the lode—and, from the congeal character of the strata, we fully anticipate the lode will be found very productive."

WHEAL HOPE.—At a meeting of adventurers, held at Liskeard, on the 29th June, the accounts—showing labour cost for March and April, 662 1s. 3d.; materials, 352 9s. 5d.; and leaving balance in favour of adventurers of 221 0s. 2d.—having been examined, were passed, and a call of 1l. per share made.—The following report from Capt. W. Taylor was read to the meeting:—"Since our last report we have extended the level on the old lode east about 6 fms., being now about 55 fms. from the engine-shaft; the part of this lode which we have taken down is of much the same character as when we last reported; we have not shot through this lode for the last 10 or 12 fms. We have also extended on the horse lode since our last report about 4 or 5 fms.; on this lode we have had some rich stones of grey copper ore, but it has been small, varying from 6 in. to 9 in. in width; a few fathoms behind the present end a branch of this lode took off in the wall, but is now very nearly come together again, when I expect we shall have more favourable ground. In driving these two levels a few fathoms further on the course of the lodes we have two desirable objects in view—that is, to intersect two kindly lodes, in the former of which we expect to come into the killas strata. We have not seen an intersection with any of the lodes in the sett, and it is my opinion that if we do anything it will be then; until we have done this we shall not have made a fair trial."

WHEAL MARY.—At a meeting of adventurers, held at Liskeard, on the 29th June, the accounts—showing labour cost for March and April, 5662 17s. 4d.; materials, 4142 15s. 11d., and leaving balance against the adventurers of 2562 17s. 6d.—having been examined, were passed, and a call of 4l. per share made.—The following report from Capt. J. Nance and J. Roberts was read to the meeting:—"During the last two months we have continued driving the 80 and 50 fm. levels west on old Wheal Mary lode, and commenced driving the 25 fm. level east (as agreed upon at the last meeting), for the purpose of ascertaining whether there is a cross-course between this mine and Wheal Sisters, and what effect it has on the lode. In driving about 3 fms. we intersected a sparry cross-course, which does not displace, or heave, the lode; therefore, Wheal Sisters lode being 19° more southerly in its direction than old Wheal Mary lode, these two lodes must either cross each other, or form a junction at or near the boundary—but, judging from the composition of Wheal Sisters lode and Mary Consols south copper lode, we are persuaded they are one lode, and that, therefore, Wheal Mary lode continues its course through Wheal Sisters, and has not yet been seen in that sett; and we have Sisters lode running through Wheal Mary sett. The 60 fm. level west has been driven since last report 6 fms., and the lode continues of just the same kindly character, being work, on an average, for the last 15 fms. about 6l. per fm.; this level being now ventilated by a winze, we may hope for some tolerable returns from this place. The 50 west, within the same time, has been driven 63 fms. without any material alteration. We have just intersected the south lode in the 25 cross-cut from count-house shaft; it is a large and very kindly lode, about 4 ft. wide, and easy throughout, worth about 7l. per fm.; we have not yet, however, been able to extend upon this lode, and, therefore, cannot form a decided opinion of it; nevertheless, should it maintain its present character, it will be a valuable improvement to the mine; there is a pitch at work on this lode, in the back of the 25 to the west of the cross-cut from the engine-shaft, at 10s. in the 12 ft., when we are raising some good ore. We are also in daily expectation of cutting this lode in the 50 cross-cut south from the engine-shaft; and, should it prove productive at this latter point, as at the 25 immediately above it, we shall be able, by draining and laying open a large piece of ground, to make pretty good returns of copper ore. We have also intersected the new tin lode in the eastern part of the sett adjoining Wheal Sisters at the 25 fm. level, and

find it about 3 ft. wide, worth about 10l. or 12l. per fm. In the 14 fm. level, on this lode, the tributaries are raising good tinstuff, sufficient to keep our new stamps of eight heads (or even 12 heads) fully supplied; this and the other promising points referred to above, will, we presume, be considered sufficient to justify us in expressing our confident hope that this mine will, ere long, raise itself from its depressed state, and (with a little more perseverance on the part of the shareholders) repay them their protracted and heavy outlay. The 25 and 70 cross-cuts north have neither of them yet intersected the lode; the 25 end is at present in a favourable stratum of soft white killas, and must be approaching very near the lode. The ground in the 70 cross-cut is still hard, but we hope soon to get through it into more favourable ground, as in the 25 above. We have about 40 tons of copper ore preparing for sampling, which we purpose sampling at Looe, on the 11th of July."

WHEAL SISTERS.—At a meeting of adventurers, held at Liskeard, on the 29th of June, the accounts were presented—showing, as received for copper ore, 17052 5s. 8d.; balance of last account, 10922 12s. 5d.—= 27972 18s. 1d.—By labour cost for March and April, 9172 19s. 1d.; materials, 2572 15s. 7d.; lord's dues, 1042 15s. 6d.; by dividend paid, 5122—leaving present balance in favour of adventurers, 10952 7s. 11d. The items having been examined, they were allowed, and a dividend of 2l. per share declared.—The following report from Capt. J. Nance was read to the meeting:—"Our south engine-shaft is now sunk to within 4 ft. of the 70 fm. level. In the 60 west the lode is 18 in. wide; we are daily expecting an improvement here, as there is a valuable lode in the bottom of the 50 immediately above, but its dip is westerly, and we do not appear yet to have driven quite far enough in that direction to reach it; in the eastern end, in this level, the lode is 4 ft. wide; and, though at present poor, it shows favourable indications, the branches mentioned in last report having united. In the 50 end west, within 8 fms. of Mary Consols boundary, the lode is 20 in. wide, and contains a branch of ore 6 in. wide. There are four pitches in the back of this level—one by nine men, at 4s.; one by four men, at 7s.; and two by two men each, at 18s. 4d.; we have also six men employed stopping; the lode in the eastern end, in this level, is 4 ft. wide, composed of quartz, capel, and a little ore. The 40 fm. level end is suspended for the present; at this level we have four pitches—one by two men, at 10s.; one by four men, at 12s.; and two by two men each, at 13s. 4d. The cross-cut at the 40 is extended south 5 fms. towards the new promising tin lode discovered in Wheal Mary Consols, which, from its present bearing east, must traverse a considerable length in this sett. We are still driving the 20 fm. level west on the north lode; the lode in the end is 6 ft. wide, and poor, but very promising indeed; and it is to be hoped that as it approaches the cross-course parallel with the productive part of the south lode, it will also prove productive; about 5 fms. behind the end we had some beautiful stones of yellow and black ore; there is a pitch working in this level by two men, at 13s. 4d."

WHEAL TREVENNA.—At a meeting of adventurers, held at the Fountain Inn, Liskeard, on Thursday, the 1st inst., it being resolved to prosecute the mine with vigour, a call of 1l. per share was made, to pay some outstanding debts due for materials, &c. The following report from Capt. S. Bennett was read to the meeting:—"Since the last meeting of adventurers, the cross-cut north from the south lode has been extended about 20 fms., in which several metallic veins (varying from 1 to 4 in. in width) have been intersected, composed chiefly of mundaic and peach, together with a little soft spar and occasional spots of black and yellow copper ore; but from the character of the middle lode in the shaft, on which we sunk a few fathoms, together with its bearing in the costean pits, I infer that we have not as yet intersected it. The killas in the cross-cut have been extremely favourable. The last stint of 5 fms. was set at the very low price of 21s. per fm., but the end at present is somewhat harder. I would, however, again strongly urge upon you the importance of further exploring the Wheal Bank lode with all possible speed. Our engine-shaft on that lode is now 20 fms. below the adit level, in the bottom of which the lode is about 2 ft. wide, composed chiefly of spar and peach, with good spots of copper ore, a little mundaic, and blende. By reference to my former reports, you will find that the adit level has been extended on the course of that lode about 140 fms.—in the course of driving which level, we had, at different times, very promising indications of copper—so much so, that in one instance it presented tribute ground. The average size of the lode is about 3 ft. wide. The shaft at present may be sunk for about 8l. per fm., and a level may be extended on the course of the lode for about 2l. per fm. We have already on the mine all the machinery which is immediately necessary for the prosecution thereof; the water has been forked, and the pumps fixed; and we are now in a position to sink, which I would strongly recommend, 15 fms. farther at least, when, by extending the levels at that depth, I have but little doubt you will be amply remunerated for the comparatively small outlay which is necessary to give that lode a sufficient trial."

—DARTMOOR CONSOLIDATED MINING COMPANY.

Sir,—In the Mining Journal of last week, I observe a very flattering report, by Capt. John Spargo and Thomas Gregory, upon the operations and progress which this company are making in opening and exploring their mines—some time abandoned by other adventurers, who, it appears, worked only a few fathoms below the surface; but, notwithstanding, realised ample returns. Much can be said of the metalliferous ores of that district—viz.: tin, lead, and a little copper; in many places, ores of zinc and manganese—yet a great deal more remains to be done before the more profitable lodes are brought to light. The very shallow depth from which fine marketable tin ore has been raised, is a certain indication that ores of a better and richer quality still remain to be worked, by following the lodes to greater depths. The manner in which the Government has looked upon the necessity of a geological survey of Great Britain, and the selection of Cornwall and Devon by the Commissioners of Woods and Forests for the first field of inquiry, is a proof that those mineral districts required their earliest attention. The very elaborate survey and report of the above counties by Sir H. De la Beche, and the enormous pile of information collected by him during his laborious task, is taken not only from the mines of the present day, but also from old records and documents, which must be of the greatest importance to those connected in either country. From the geological character of the district selected by the Dartmoor Consols Company for their operations, I feel almost assured they will be amply rewarded for their outlay. The Great Wheal Friendship Mining Company, which has been for many years in operation, and is still at work, have met with great success; and I am informed, that they have made ample returns to the shareholders. I can see no reason why the mines on Dartmoor, whose mineral veins are equally rich and productive, should not meet with the same success.

Ashburton, Devon, July 8.

DEVONIAN.

—PRACTICAL MINING—POWERS OF A PURSER.

Sir,—Will you permit me to ask my better-informed mine adventuring brethren, through the medium of your Journal, a few questions on mining matters, and to solicit their reply through the same channel, in your next paper. If so, the first I would put is—1. How can a legal meeting of mine adventurers be convened, without the concurrence of either the pursuer, or manager, of the mine, the two latter holding shares?—2. Can the pursuer of a mine legally refuse to allow any adventurer a sight of the cost-book at any time when called on for that purpose?—or can he refuse to show it, except at a general meeting of the adventurers?—3. Are the acts of the pursuer, in contracting debts, &c., for the mine, binding on all the adventurers, should such acts be committed without their knowledge, or sanction?—4. The pursuer of a mine, having sufficient confidence in the adventurers, as to give credit in the cost-book for all calls made for the mine—can he afterwards legally bring forward any arrears that may be due from adventurers who have not paid, and compel the other adventurers, who have paid, to make up such deficiency?—5. The pursuer, manager, and three or four other adventurers in a mine, having promised to pay for certain materials supplied to their co-adventurer, who was the contractor for an engine, which has been erected on their mine, and for which the contractor has been paid by the adventurers the amount of his contract, but the materials not being paid for by the contractor, the adventurers have been called on for the amount of such supplies—are all the adventurers liable to pay for those materials, or those only who made themselves responsible—they having done so without the concurrence, or knowledge, of the other adventurers?—THOMAS JOHNS: Breage, near Helston, July 6.

THE POLGOOTH TIN AND COPPER MINE.—The reopening of this mine, situated near St. Austell, was commenced about two years since, at the recommendation, and under the management (which still continues) of Mr. Thomas Bell, mining agent of that place, and has been attended hitherto with the following results. By means of a well-known very powerful steam-engine, transferred with its appurtenances from Wheal Darlington sett, the mine is explored to the 76 fm. level of the old working inclusive; and it is reckoned that the machinery will prove of sufficient power to bottom the mine, or, say, to fork her water to the 110 fm. level—the lowest ever yet opened. Many new and valuable lodes have been discovered or regained—one, in particular, called Rag's lode, which had been lost, and proves of extraordinary size and richness. The returns from the stamp heads (of which there are 48 fire and 24 water stamps), have yielded, under tribute pitches ranging from 10s. to 4s. 6d. in the 12 ft. sterling, between 60002 and 70002; while there is tinstuff at grass, or ready to come to surface, together nearly equal in value to the amount returned, and it is now found that ores may be sent up in any quantity, and improving in quality, as the levels are recovered—in short, the amount of produce seems to be only limited by the means of raising and returning it, which are in course of rapid augmentation. The copper lodes in Polgooth already discovered are abundant, and in quality of ore much exceeding the average of the county; as yet, however, they have been but partially worked, the chief object having been to prove her as a tin mine. The importance of this adventure to the welfare of St. Austell, and the operative population of its vicinity, especially in these times of stagnation of enterprise, and consequent difficulties for the poorer classes, is strikingly obvious; and it need scarcely be noticed upon the present showing, that the adventurers in this undertaking are, beyond all doubt, well satisfied with the management of Captain Bell, and the conduct of the sub-

agents he has employed—the out turn so far, and the favourable promise for the future, being fully equal to, if not exceeding, any anticipations in the first place held out by him. It may be added, that the mine is now doing considerably more than defraying her current cost, and the present scale of returns will soon yield a surplus for dividend on capital at a very handsome rate, clear of bygone liabilities, leaving her valuable plant entirely free.

WHEAL GOLDEN SILVER-LEAD MINE.—We understand that the greater number of shares in the company, which has been formed for working this mine, have now been taken, and that operations are expected soon to be commenced. It is considered to be one of the most promising undertakings of the kind which has been brought before the public for some time. The mine is situated in one of the best mineral districts in Cornwall (in the parish of Perranzabuloe), and, during its last working, had the advantage of an outlay of capital to the extent of 18,0002, chiefly in underground works and operations. Returns of 50 tons per month were being made at the time of its suspension, which event was owing to the low price of lead, in conjunction with other matters of dispute, between the then proprietors of the mine. The average produce of the ore is about 72s. per cent. for lead, and 24s. of silver per ton, which, at the present price of pig lead, would make, at a public sale, 152. per ton. The new lease is for 21 years from the present period, at the exceedingly moderate royalty of 1-24th of the produce.

MINE DIVIDENDS.—In our article of last week, giving the list of dividends paid in six months ending 30th June, we stated the amount as 76,0302; since this Wheal Sisters has paid 5122, and East Wheal Rose 76802—these should have been added to the list—thereby making it 84,2222 for the six months, being an increase of 14882 over the corresponding six months of 1846; but, allowing for the falling off in two mines alone of 22,5282, it shows an increase of dividends for the six months of 24,0162.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

CONDURROW is looking better generally, and in one particular point much improved; I allude to the 50 fm. level (bottom end east), on engine lode, where there is every appearance of a course of ore coming into the lode; the back of the said level is being stopped at 20s. per fm., and is worth about 20l. per fm. The deep adit end west produces from 8 to 10 tons of ore to a fm. On the Llandower lode, and the 10, cut on the same lode, about 7 tons, leaving good backs and bottoms.

GWINEAR CONSOLS.—I have visited this mine, and can assure you that there is a most valuable and extraordinary lode in the adit end, going west, being from 6 to 7 ft. wide, from which at least 50 tons of very superior ore have been broken since this day week; they have driven through it about 5 fms., and the lode in the end is as good as ever; and I am of opinion, that it will be found productive both in height and depth, and, consequently, the returns will be considerable.

HERODFOOT is looking well, particularly in the south bottom end. She produced 5002 worth of ore last month, and will sample immediately 45 tons of best ore, and about 80 of inferior. We are daily expecting to cut the 82.

MARKE VALLEY.—A very considerable improvement has taken place here during the last three weeks. In driving east on Sarnam lode, in the 65 fm. level, we have got into ore ground, 12 fms. before we expected to reach the shoot of ore discovered a short time since in the 50 fm. level; at first the lode produced 8 tons of ore per fm., but now it is worth 10 tons per fm., with every prospect of continuing to be equally productive. In the 50 fm. level we have had a course of ore for about 18 fms., and the end is still good. In the 80 fm. level we have cut Marke's lode, and extended on it east and west; it is about 18 in. wide, composed of can, soft spar, peach, and squats of black and yellow ore—altogether a kindly and promising lode.

WEST DOWNS CONSOLS.—More than sufficient tin has now been broken than to cover the cost to the present time. Mr. P. N. Johnson has visited the mine, and pronounced the quality of the tin to be extraordinarily rich; he took some specimens with him to have them assayed.

EAST ALVENKEY.—The lode is looking most splendid; I have an excellent lode now in sight in the shaft, worth all of 332. per fm. I never saw richer tinstuff than what we are breaking. You would be surprised to see it; it is like so many flakes of cast-iron. We hope to give you good news respecting the middle lode; I should think about the latter part of next week.

WHEAL SAMPSON.—The lode is about 4 ft. wide, underlying about 2 ft. in a fathom—a kindlier lode was never seen. You, nor any person else, never can look on a kindlier lode. The walls are as smooth, as the saying is, as a glass bottle. On the foot wall, there is a branch of flookan, about 2 in. wide, impregnated with mundaic; lying on it is a branch of beautiful spar, mixed with goosan and white mundaic; lying on this branch to the north, there is a branch of mundaic, 1 ft. wide, solid, spotted with copper and barytes; then, again, to the north of this, is beautiful goosan—some of which I have sent you. I never saw the lode looking half so kindly before; there ought to be a pare of men driving the sea level. I must say it is one of the richest lodes in its nature that ever I cast my eyes on. Whether it is going to make gold, silver ore, lead, or copper, it is out of my power to tell; but you may rely on it, it is going to make a mass of one of it in depth; it is altogether quite different from what you saw it. We are saving some barrows of the mundaic and goosan, as we are thinking whether it may not contain mineral. Have you received the barrels of mineral from this mine? I carried it to Plymouth, and lodged it at the steam-packet office.

MEETINGS OF THE IRON TRADE.

The annual quarterly meetings of the Ironmasters of South Staffordshire and Shropshire, commenced at Walsall, on Tuesday; the second was held at Wolverhampton, on Wednesday. The attendance of those engaged in the trade was unusually numerous, and included some of the largest makers in the district. It was ascertained, that the demand for iron continued sufficiently large to afford an easy market for existing prices, and that, consequently, no reduction would be acceded to. There remain on hand heavy orders for railway purposes; the demand from the continent is also considerable; and the gratifying fact was reported, that during the last two or three weeks, there have been indications of an increased quantity being required for the various manufactures of this town and district.

That the present quotations are firmer now than they were three months ago, cannot be denied. At this time we have in view the fact that the existing pressure upon the monetary concerns of the country (that some difficulty might be experienced amongst the smaller makers in standing by current prices). The result showed them to be correct; for it is well known that iron has been sold—and not in small quantities either—at a price averaging 5s. per ton lower than the rates acknowledged by the leading houses in the trade; various causes, however, would seem to indicate a greater degree of firmness throughout the coming quarter.

In Staffordshire bars of the best description the present price, at the works, is 10l.; and we are assured that not a single order would be received for any quantity, however large it might be, at a lower figure. The average price of pigs may be put at 5l. per ton. At these two meetings, we were informed, that accounts have been met with much punctuality; but, notwithstanding the increasing demand for iron for manufacturing purposes, as above set forth, there appears to be an almost unanimous opinion that the general trade of the district is not in a very healthy condition, and that altogether its concerns do not wear that exhilarating aspect which characterized them a few months ago. It is probable, however, that the worst of the storm has been experienced, and that no very long period will elapse before a complete return of the spring-tides of prosperity will be experienced. In corroboration of this view, it may be remarked, that indications of this have been noticed in some parts of the district—at Stourbridge, and other places in that vicinity, the works are all tolerably well employed.—*Birmingham Advertiser.*

BIRMINGHAM, FRIDAY.—The third meeting of the quarter was held here yesterday, at the Town-Hall, and a more numerous meeting of the trade has not been held in this district for some years past. All the principal houses were represented, and the trade was unanimously pronounced to be in a firm, healthy state, with a number of orders on hand to fully justify the continuance of the prices of last quarter. At this meeting, the general state of the trade constitutes the principal inquiry—the giving and taking orders, and final confirmation of the prices being reserved for the last meeting of the quarter, which takes place at Dudley, and will be held on Saturday (this day).

THE APPLICATION OF ELECTRICITY TO THE SMELTING OF COPPER.—This discovery was alluded to by Sir R. H. Inglis, at the recent meeting of the British Association, who said—"I believe a process has been patented for that purpose; but, as yet, perhaps, sufficient time has not elapsed to test its full value. We all know that an experiment succeeds perfectly in the case of a model, or in a laboratory, which may not succeed so perfectly when the miniature steam-engine, for example, is extended to its ordinary size in a manufactory, or when the operation is transferred from ounces to tons. But if the hopes, expectations, and confidence of the discoverers be realised, their plan will be of the greatest value to this country, and of even greater proportionate value to some of the Queen's most important colonies. It has been said that 10,000 tons of copper ore were sent last year from Australia to be smelted in England; and that they produced no more than 1600 tons of copper. It is evident, therefore, that if, by this process of smelting by electricity, the refuse—namely, 8400 tons—can be left on the spot, 8400 tons of shipping are liberated for other purposes of commerce between the colony and the mother country; and the saving of coal in England, an object not only devoid of interest, is immense."

An English engine-driver, named Adams, employed on the Orleans and Tours Railway, has been condemned by the Correctional Tribunal of Tours to a fine of 100 frs. and cost, for having caused the death of a man named Buisson, employed in the workshops of the railway, by running into some engines on a siding, with a pilot-engine, owing to his having driven the pilot-engine too rapidly, and neglected to use the whistle.

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 15 6—Davison's West Hartley 17 6—Eden Main 17 6—Wall's End Bewick and Co. 17 3—Hawthill 18 9—Whitwell 17 3—Ships, 23; sold, 49.
WEDNESDAY.—Hasting's Hartley 17 6—Ord's Redhough 16 6—West Wyham 16—West Hartley 17 3—Eden Main 17 6—Anderson's Garfield Coke 30—Barnwellwater Hartley 17—Wall's End Brown's Gas 15—Hawthill 18 9—Hills 13 3—Walker 17 3—Hilton 16 6—Brady's Hartley 18—Hartlepool 18 6—Thorley 17—Seymour Toss 17 6—Tees 18 3—Ships at market, 49; sold, 30; unsold, 39.
FRIDAY.—Cart's Hartley 17 3—Chester Main 16 6—Hollywell Main 17—Original Taffield 15 6—Ord's Redhough 16 6—Ravensworth's West Hartley 17—Wall's End Cannel 16—Hilton 17 3—Killingworth 17—Brady's Hartley 18—East Herton 17—Hawthill 16 6—Hilton 16 6—Stewart's Hartley 16 6—Whitwell 17 3—Hough Hall 17 3—Seymour Toss 17 6—Tees 18 3—Copen Hartley 17 3—Ships at market, 56; sold, 39; unsold, 37.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.	
Bank Stock, 7 per Cent., 156½	Belgian Bonds, 4½ per Cent., —
3 per Cent. Reduced Ann., 88½	Dutch, 2½ per Cent., 57½
3 per Cent. Consols Ann., 88½	Brazilian, 5 per Cent., 54
3 per Cent. Annuit., 87½	Chilian, 6 per Cent., —
3½ per Cent. Ann., 91	Mexican, 5 per Cent., 19½
Long Annuities, 91	Spanish, 5 per Cent., 31
India Stock, 10½ per Cent., 244½	Portuguese, 5 per Cent., —
3 per Cent. Consols for Acc., 88½	Russian, 5 per Cent., 111½
Exchange Bills, 1000l. 2d., 14 11 14 pm.	

MINES.—There has not been so much activity in the mining share market this week as we anticipated, from the amount of business transacted during the former; at the same time, we are of opinion that a decided improvement may be calculated on, from the many inquiries that have been made, and number of shares in the larger dividend-paying mines, which are now being in course of negotiation. The cause of this business being incomplete may be attributed to holders standing out for higher prices, and, in some instances, above our present quotations.

We published last week a list of 29 mines, with the amount of dividends paid during the past six months, together with the expenditure upon such shares, and, consequently, the present premium, taking them at their market value, or the last price each share has been known to obtain; which statement, from the numerous inquiries since made, has no doubt created a manifest desire to invest in an interest, that from its peculiar constituency, when conducted by legitimate procedure, as sanctioned by the Statutory laws of the Duchy, may be deemed a safe and profitable investment. The slight improvement in the standard of last week has given rise to a hope, that a progressive advance will take place; although small, it will have a tendency to allay the irritation felt by the adventurers in many mines, which, at a vast monthly outlay, can scarce keep themselves from a loss, in mines that would, with a fair standard, be meeting cost, or paying dividends. It is to be regretted, that this shameful monopoly of the smelters has not yet met a sufficient opposition in the market, to compel, by competition, an equitable price for copper ores, as compared with the present advancing prices of fine copper.

At the Treleigh Consols meeting, on Monday last, a dividend of 6s. per share was declared.

South Wheel Francis meeting, on the 5th, declared a dividend of 12l. per share, reserving a balance of 1372l.—this reservation is to meet the great outlay necessary to cover the costs of a new powerful engine required at the new shaft in course of sinking in the western ground; the dividend though less by 3l. per share than the last declared, the accounts will show a greater balance, exclusive of the deduction.

East Wheel Rose meeting, also held on the 5th, has declared a dividend of 60l. per share, reserving a balance of 3580l., after payment of the balance of 2351l. due to the North Wheel Rose adventurers for purchase of that sett. The mine is stated to be looking remarkably well; but it should be observed, that there have been five sales of lead during the last two months, which will account for the highly gratifying statement presented.

We perceive in the *Morning Advertiser*, of Wednesday, a pleasing article on Metals and Mining, at the same time referring to Dartmoor Consols, as holding out much promise as a speculation; so far we concur fully with our contemporary, but would remark that he has committed an error in stating the amount of profit returned by a former company at one period was 30,000l. annually—we believe the profits, during the short time of their operations, amounted to 30,000l., but not annually.

Gwincar Consols was stated last week to have considerably improved, and that transactions in the county had been made at a great price; the discovery, we hear, continues promising, but shares have been refused in the county at 25l.

Buyers are to be found in East Wheel Rose, Treviskey and Barrier, South Wheel Francis, Trehan, Trellawney, Herodsfoot, Wheel Mary Ann, Stray Park, Carn Brea, Condurrow, North Pool, &c.

Shares in the following mines have changed hands during the week—viz.: Gwincar Consols, South Wheel Maria, Treviskey and Barrier, Tremayne, West Wheel Providence, Carn Brea, Treleigh, Wheel Mary Ann, Trehan, East Crowndale, Plymouth Wheel Yeoland, Birch Tor, West Wheel Maria, Franco, &c.

In the foreign share market we do not learn that many shares have changed hands, except in the Imperial Brazilian, in which some business has been done. Kinzigthals have been done, but not to any considerable extent. Accounts have been received by the *Medway Royal West India Mail steamer*, which are highly interesting, as far as regards the mines: the amount of specie, &c., received by her is of considerable amount.

RAILWAYS.—The business of the week was ushered in by remarkable dulness, and, in many cases, by a decline in prices, more particularly the shares of the Great Western Company. On Tuesday prices became more steady, but without much business doing; nor has there been any activity in the market worthy of notice up to last evening.

MEETINGS.—**DUFFY LINTY AND FORTH CAVE:** adjourned annual meeting; the report stated that it was expected the bill for uniting with the Linty Valley Company, and extension, would shortly receive the Royal assent—that the traffic had greatly increased since last year, and was still increasing.—**DURHAM RAILWAY:** annual meeting at Amsterdam; the receipts had been for the year, to April last, 552,301 guineas—showing a decrease of 86,796 guineas; the expense of working was 330,545 guineas.—**NORTH STAFFORDSHIRE:** third half-yearly meeting; receipts to present time had been 1,45,946l. 10s. 8d.; and expenditure, 540,100l. 14s. 3d.—**GREAT NORTHERN:** special meeting, to authorize directors to lease Royston and Hitchin Railway.

EDINBURGH AND HAWICK: This line has been opened for eight miles from the former place to Dalhousie. The Lowestoft and Reedham line was opened on Thursday week. Since the completion of the railway throughout from London to Edinburgh, every exertion has been made to secure the perfect co-operation of the several companies throughout, and it is expected the fine tables will be accurately followed out. The preamble of the bill of the South Yorkshire, Doncaster, and Goole, was declared proved in the Lords committee on Thursday last, and the Royal assent is expected to be obtained on the 18th.

SHAKESPEARE: The London and North-Western Railway, after having carried goods for the Irish charity, amounting in freightage to 2000l., entirely free, have now refused to carry any more, having been extensively cheated by passengers representing their luggage under that plea.

At Messrs. Lamond's sale, on Tuesday, business was quiet, and few transactions were entered into; and on Friday there was no change worthy of notice—the market being dull, and but little business done.

HULL, THURSDAY.—Since we last wrote, our market has been without material alteration. We have not had much business passing; and, where sales have been pressed, lower prices have been obliged to be taken.

THAMES TUNNEL COMPANY. The number of passengers who passed through the Tunnel in the week ending July 3, was 16,023; amount of money, £75 1s. 10d.

RAILWAY TRAFFIC RETURNS. From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2700 miles of railway, was 160,122, thus accounted for—101,496, for the conveyance of passengers only, 41,512, for the carriage of goods, and a remainder of 17,115, for passengers and goods together, not respectively ascertained; being an increase over the corresponding week of last year of 25,979, when the mileage was about 2,322.

Name of Railway.	Length.	Present actual cost.	Last Div.	Traffic Returns.	1847	1846
Arbroath and Forfar	15	£145,000	3p.c.	£ 265 6 11	£ 234	
Chester and Birkenhead	15	556,293	2½	202 18 9	684	
Dublin and Drogheda	35	695,248	3½	1023 11 11	863	
Dublin and Kingstown	6	349,726	9	1616 4 6	1987	
Dundee and Arbroath	16½	156,323	6	—	375	
Dundee, Perth, and Aberdeen	47	—	—	1011 1 6	—	
East Lancashire	28	814,417	—	1026 2 9	—	
Eastern Counties	194	6,312,026	7	12846 17 11	10003	
Eastern Union	17	327,252	—	1065 2 5	466	
Edinburgh and Glasgow	46	2,112,136	6	3385 11 10	3325	
Glasgow, Paisley, and Ayr	53	1,467,381	7	2651 18 3	2118	
Glasgow, Paisley, & Greenock	23	835,918	2	1379 14 8	1209	
Great Southern and Western	56½	1,348,718	—	1741 10 11	—	
Great Western	241	9,714,939	8	22843 15 8	21696	
Kendal and Windermere	14	—	—	193 0 0	—	
Lancaster and Carlisle	70	975,625	—	1450 8 2	—	
London and North Western	378½	18,042,004	10	45106 5 10	40291	
London and Blackwall	4	1,102,717	1½	1436 0 3	1286	
London, Brighton, & South Coast	112	5,109,667	7	9694 6 7	6911	
London and South Western	127	4,276,789	9	10198 4 3	8300	
Manchester & Leeds	117½	5,036,391	5½	8441 17 0	6911	
Manchester, Sheffield, & Lincoln	148½	6,886,411	8	1436 16 1	1286	
Maryport and Carlisle	49½	1,678,108	5	700 2 0	626	
Midland Company	329½	7,863,274	7	20647 8 10	17352	
Newcastle and Berwick	9	1,184,079	—	1211 10 6	—	
Newcastle and Carlisle	65	1,184,080	5	2615 5 6	9542	
Norfolk	70½	1,190,689	7	2059 7 7	9077	
North British	129	1,498,968	—	1963 11 8	—	
Shrewsbury and Chester	18	364,945	—	436 5 9	1060	
South Eastern	20	1,061,283	8	845 9 9	869	
South Devon	148½	5,886,411	8	1436 16 1	1286	
Taff Vale	30½	888,411	6½	1436 16 1	1286	
Ulster	25	356,343	5½	490 18 7	578	
Whitehaven Junction	12	—	—	222 9 11	—	
York and Newcastle	157½	1,719,317	9	4084 17 0	6821	
York and North Midland	162½	2,483,556	10	7324 15 11	6411	

PRICES OF MINING SHARES.

BRITISH MINES.		BRITISH MINES—continued.	
Shares.	Company.	Shares.	Company.
1000	Aberystwyth	256	South Tolgus
312	Alfred Consols	800	South Towan
1024	Alfred Consols	256	South Trellawney
326	Andrew and Nangles	128	South Yeoland
10000	Ayrshire Iron Company	128	South Wheel Bassett
1624	Baleswadden	124	South Wh. Francis
128	Balcon Consols	256	South Wh. Hope
10000	Barnwell Iron Co.	1000	South Wh. Maria
1000	Barristown	256	South Wheel Rose
4000	Bedford	10000	Southern & Western, Irish
128	Besore Lead Mine	280	Spearne Moor
315	Birch Tor Tin Mine	256	St. Austell Consols
8000	Blagenavon	32	St. Ives Consols
112	Botallack	128	St. Michael Penkivel
120	Brewer	1000	Stray Park
10000	British Iron, New, regis.	9600	Tamar Consols
—	— Ditto ditto, scrip.	1024	Tavy Consols
128	Budnick Consols	6000	Tincroft
128	Burthorpe	1000	Tin Vale Consols
100	Bwch Cwmerfyn	256	Ting Tang
100	Callstock	128	Toburnbury
1000	Callington	256	Trelawney
256	Caradon Copper Mine	1000	Treleigh Consols
256	Caradon Mines	2000	Trenance
256	Caradon United	256	Trenow Consols
256	Caradon Wh. Hooper	96	Tresavean
1000	Carn Brea	120	Trethellan
3048	Carmarthen Consols	128	Trevelkey and Barrier
1000	Carnegie Valley Quarry	256	Trevelkey Hill
156	Cleveland	128	Trevelkey
112	Coatliffe Hill	6000	United Hills
1900	Connaharra	100	United Mines
500	Comblawn	256	Wellington Mines
128	Confort	128	West Basset
256	Condurrow	256	West Caradon
256	Cook's Kitchen	256	West Cargoll
1000	Crook's Kitchen	512	West Fowey Consols
1000	Crook's Kitchen	256	West Gwincar
1024	Crook's Kitchen	—	West Kewick Consols
240	Cradock Moor	256	West Providence
128	Creeg Brawas	200	West Seton
800	Cubert Mine	120	West of Scotland Iron Co.
2048	Dartmoor Consols	128	West Trethellan
7100	Dartmoor	256	West United Hills
1024	Devon & Courtenay Con.	256	West Wh. Friendship
1000	Dunrodd	845	West Wheel Jewel
186	Dolcoath	2560	West Wh. Maria
2560	Durham Walls	2560	West Wheel Rough Tor
10000	Durham County Coal	256	West Wheel Shepherd
128	East Alvenney	256	West Wheel Tolgus
128	East Arden	256	West Wheel Treasury
128	East Arden	8200	Wicktor Copper
9048	East Crowndale	184	Wheel Adams
512	East Crowndale Sil.	1000	Wheel Agar
128	East Crowndale	256	Wheel Albert
100	East Reliant	128	Wheel Acland
9000	East Tamar Consols	256	Wheel Allen
—	— East Wheel Albert	256	Wheel Anderton
94	East Wheel Croft	128	Wheel Ann
256	East Wheel Fortune	128	Wheel Ash
3048	East Wh. Rough Tor	1024	Wheel Ash
—	— East of Scotland Iron Co.	120	Wheel Bal
123	East Wheel Iron Co.	256	Wheel Barbara
256	Elborough	256	Wheel Benny
256	Emoor Wh. Eliza	256	Wheel Blencowe
512	Fewston Iron Co.	256	Wheel Buckets
3048	Galvanizing Iron Co.	256	Wheel Bygon Consols
10000	Glen Mining Co. for Mine	256	Wheel Calstock
2048	Georgia Tin Mines	136	Wheel Clifford
256	Gonawena	1024	Wheel Concord
128	Goonvrea	128	Wheel Courtenay
2444	Graham & St. Aubyn	6000	Wheel Curtis
100	Great Consols	256	Wheel Dyke
256	Great Colliest Moors	256	Wheel Fortescue
256	Great Colliest Moors	512	Wheel Fortune Consols
256	Great Colliest Moors	2048	Wheel Frederick
512	Gr. Wh. Rough Tor Con.	388	Wheel Franco
1000	Great South Tolgus	1024	Wheel Grace
100	Groswinlon	128	Wheel Harriet
1000	Gunnis Lake	2048	Wheel Howell
256	Gwincar Consols	256	Wheel Jane
1000	Hanson	256	Wheel Kekewich
1000	Harrowbarrow Old Mine	256	Wheel Lantana
800	Hawmoor	112	Wheel Margaret
6000	Helgaton Down Con.	256	Wheel Maria (Hayle)
256	Herdcombe	1024	Wheel Maria
256	Herdsfoot	4000	Wheel Martha Consols
10000	Hibernian	512	Wheel Mary Ann
—	— Hobbs Hill	256	Wheel Mary Consols
1000	Holmhead	256	Wheel Mary (Lanivet)
827	Holmhead Brightling	256	Wheel Maiden
2048	Lamheroo Wh. Maria	128	Wheel Pollard
2048	Lauriet Consols	120	Wheel Prospect
300	Larkholme	120	Wheel Reeth
128	Leland Consols	128	Wheel Rose
160	Lerist	2048	Wheel Samson
1000	Lewis	256	Wheel Seton
1000	Llyn Valley	256	Wheel Sisters
1000	Llyn Valley	256	Wheel Sophia
2560	Llyn Valley	256	Wheel Sparrow
256	Ludwithall Consols	128	Wheel St. Ann
128	Ludwithall	260	Wheel Trelawney
4000	Marke Valley	256	Wheel Tremayne
5000	Medley Hills	256	Wheel Tremayne
10000	Mining Co. of Ireland	128	Wheel Trew
256	New East Crowndale	92	Wheel Tryphena
100	North Pool	128	Wheel Venland
70	North Roskear	256	Wheel Vlow (Ferraz)
512	North Trelburget	184	Wheel Vyvan
100	North United	256	Wheel Williams
256	North Wh. Abraham		
362	North Wh. Leisura		
128	North Wh. Providence		
15000	Northern Coal Co.		
1200	Old Delabole Slate Co.		
128	Pan Consols		
256	Pennaholm Moor		
4000	Pennant		
1000	Pennarth		
256	Pentwyn Wh. Maria		
128	Pentwyn Wh. Maria		
128	Perran St. George Wh.		
128	Perran Wh. Virgin		
512	Plymouth Wh. Yeoland		
2048	Prince Edward		
112	Providence Mines		
256	Redruth Consols		
1000	Redruth Iron		
10000	Redruth		
256	Rose Consols		
1000	Rosewall Hill		
256	Rosewall Mines		
—	— Shotts Iron Company		
2560	Silver Valley		
128	South Caradon		
256	South Dolcoath		
256	St. Friend Wh. Ann		
200	South Harvannah		
9000	South Tamar		

FOREIGN MINES.	
5000	Alten Mining Company
15000	Asturian Mining Co.
20000	Australian
10000	Anglo-Mexican Co.
12374	Ditto Subscription
3000	Bolanos
10000	Ditto Scrip
12000	Brazilian Imperial
10000	Cobre Copper Co.
8500	Colombian Co. regis.
5000	Ditto Scrip
5000	Copiapo Mining Co.
10000	General Mining Ass'n.
5000	Kinzigthal Mining Ass.
20051	Mexican Company
2000	Mexican & South American
5000	Nocenas & Cocas
99320	(J.L. del Monte, regis.)
—	— Ditto unregistered
—	— Ditto Rod Debutures
—	— Ditto Black ditto
—	— Ditto Loan Notes
5000	Royal Spanish
2000	Sancti Spiritus
14000	St. John del Rey
45174	United Mexican

LATEST CURRENT				OF METALS.			
LONDON.				LONDON.			
	£	s.	d.		£	s.	d.
IRON—Bar a. Wales, ton	7	6	10	Ordin. sheets, lb.	0	0	0
..London ..	0	0	0	..bottoms ..	0	0	0
Nail rods ..	0	0	10	YELLOW METAL SHEATHING	0	0	0
Hoop (Star) ..	0	0	0	..Cum. blocks g. cast.	0	0	4
Sheet ..	0	0	0	..bars ..	0	0	4
Bars ..	0	0	0	..Kelped ..	0	0	4
Welsh cold-blast	0	0	0	..Straita ..	0	0	4
foundry pig ..	0	0	0	..IX ..	0	0	10
Scotch pig, Ch. ..	0	0	0	TIN-PLATE—Ch, IX, box	1	8	10
Rails, average ..	15	0	0	..IX ..	1	14	1
Russian, CCN ..	0	0	0	Coke, IC ..	0	0	1
..Gales ..	0	0	0	..IX ..	0	0	0
..Finn ..	0	0	0	LEAD—Sheet & ..	0	0	19
..Archangel ..	0	0	13	Fig, refined ..	0	3	36
Swedish, on the spot	11	10	15	..common ..	0	18	0
..Steel, Eng. ..	0	0	0	..Spanish, in bd.	0	5	0
..kegas ..	0	0	15	SPRITES—(Coke) on spot	0	0	20
..Tiler ..	0	0	97	..for arrival 19	15	20	0
Tough cake ..	0	0	98	ZINC—(Sheet) on export ..	0	0	27
Best selected ..	0	0	101	QUICKSILVER ..	0	0	4

FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES.

RAILWAY CRANES, FIRE-ENGINES, GAS, &c.
PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING
OF EVERY DESCRIPTION.

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.
VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints.
Sole manufacturer,
JAMES LYNE HANCOCK,
Goswell Works, Goswell-road, London.

NOTICES TO CORRESPONDENTS.

It will at all times be much trouble, and frequently considerable delay, if communications are simply directed—
To THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

Also, to avoid trouble, POST-OFFICE ORDERS should always be made payable to WILLIAM SALMON MANSSELL, as acting for the proprietors.

"Carbon" (Dudley).—Though we are ready at all times to give place to inquiries likely to elicit information of interest to our readers, we cannot think of publishing those which "Carbon" puts to "Obadiah," respecting the Dawley Field Works. Whatever dissemination may exist between the old chartermasters and the manager, and the complaint of monopoly in these works, would be best rectified by an appeal to the owners of the property, or the authorities of the district.

WREAL CONCORD MINE.—We hope to receive a report of the proceedings at the meeting of adventurers, on Monday last, which will render the insertion of Mr. Crapp's letter unnecessary.

"Paris."—Received: quite satisfactory.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, JULY 10, 1847.

We have been informed that parties, largely interested in lead mines in South Wales, Ireland, and other districts, have lately decided upon the sale of their ores by public tender—a mode now universally adopted in Cornwall and Devonshire by parties not having smelting works of their own. The market of the River Dee has of late afforded but feeble competition for the ores which have been sent there—a fall in the price upon some qualities, of 20 per cent., having occurred during the last three months; whilst there has been no corresponding fall, either in the prices of pig-lead, or of the silver which the ores yield.

The credit given in the River Dee is short, being but 30 days from date of sale: this circumstance may partly account for the great depreciation which has occurred; but the want of competition appears to us to have much more to do with it; and we think that lead ore producers generally would do wisely to adopt the Cornish mode of sale by tender.

The number of firms, now engaged in the smelting of lead and of argentiferous lead ores, and having works on the Dee, in Cornwall, Devon, South Wales, and other places near the sea coast, or navigable rivers, and the advantage which several of them will derive, from being able to purchase ores from different localities and of different qualities, will probably induce them to place more capital in the trade, and to increase their scale of operations.

The present moment is most favourable for parties making such arrangements, as stocks of ore can be brought at very reduced prices, and credits of three months, from the date of sale, are to be given.

The prospective view of the British lead market is encouraging; the mines of this country, although more numerous than they were, are on the whole producing a smaller quantity of ore than they did five years ago, and, indeed, less than the average quantity for a long series of years: those of the United States of America are not producing nearly so much as they did two years ago; and from the improved state of that country, the internal consumption of lead has increased, so as to leave little, or none, for export to Europe: then, again, Spain has fallen off very largely in its production during the last 10 years, and exports little but hard lead, and the mines there are rather on the wane than the contrary.

The present state of the money market, and the general depression of trade in the manufacturing districts, has tended to render the demand for lead less brisk than usual; but a good export trade is, we think, likely to arise.

Under this aspect of affairs, we should strongly recommend those who have rich lead mines not to raise and sell any large quantity of ore at the current low prices; the wise course is, to reduce the supply, and render the article more scarce, until a better demand exists.

In another column will be found a report of the half-yearly meeting of the MINING COMPANY OF IRELAND; and, although by no means of so gratifying a character as former ones, yet there is nothing in it to cause discouragement, or inquietude, to the shareholders. The withholding the payment of the usual dividend has, no doubt, caused much regret, and, doubtless, to some small holders great inconvenience: but we cannot see, under all the circumstances, how the directors could have done otherwise than they have, without jeopardising the interests of the company, and risking the too great diminution of their working capital, the profits for the half-year having been only 2373*l*. It must, in all cases, tend more to the security of a company, to keep up a reserve fund to meet any emergency which may arise, and thus avoid the disagreeable necessity of calls, or the expensive one of loans, than the declaration of exorbitant dividends, which there is no certainty of continuing. It will be seen, that the mines and machinery are in excellent working condition, and that the causes which have led to the great falling off in the profits from the Knockmahon Mines are likely to be removed.

In the too great excitement of speculation which at times comes over us, and in the consequent eagerness for money-making by now mining sets, those who in such times embark their cash, with the sole object of getting an immediate premium, too often overlook one or two important facts:—1. That mines cannot be made without money.—2. Money cannot be raised without calls. It is upon this latter point we wish to make a few remarks. To suppose that a mine can be carried on upon credit, is absurd; and yet many shareholders, by their dilatoriness in paying up, seem to imagine that merchants do not want their bills paid, or the labourers their hire! When a set of adventurers form together to work a mine, they do it in the hope eventually of getting a return for their outlay; but, to obtain this, work must be done, machinery erected, and various liabilities incurred, towards which each agrees to subscribe his quota; and, by no rule of equity or justice, can one adventurer be allowed to throw the onus of such liabilities upon his co-adventurers, and afterwards step in to reap the benefit of their exertions. Were such for a moment allowed, there would be an end to all good faith in mining—in fact, all confidence in the Cost-book System. We have heard, of late, and which is our reason for alluding to the subject, of promising mines crippled in means, because adventurers will not pay up their calls, and of shareholders, who, having forfeited their interests rather than pay costs whilst their mines were poor, commence actions to recover their shares now that the mines are rich. We have heard, too, of the lord of a mine having sold his sett for a large sum of money, besides obtaining a lot of shares free, who has graciously allowed his co-adventurers to expend a large sum of money to prove his mine, but has steadily refused to pay his own calls. This, perhaps, will scarcely be credited; but, nevertheless, we are advised, upon the best authority, that such is the fact; and, as it is not likely to reflect much credit upon the county of Cornwall, we forbear, for the present, further mention of it, in hopes we shall, by his paying up, be saved the unpleasantness of personal allusion. We wish more particularly in this notice, to call upon ad-

venturers in general to consider the necessity of contributing their share of cost incurred in prosecuting their undertakings, and not allow the onus of responsibility to rest upon managers and pursers alone. We have avoided all mention of individuals and mines; but a list is before us, to which we shall shortly refer, not only as regards arrears, but management.

A letter from our correspondent, Mr. J. DE LA HAYE, of Liverpool, will be found in another column, in which he states, that the observations made by Mr. MOTLEY, in a communication in last week's Journal, are founded in error, and gives a history of the proposed construction of a tubular bridge for crossing the Menai Straits. Whatever may have been the plan which Mr. G. STEPHENSON is accused of having taken from our correspondent, we believe Mr. MOTLEY is correct as to the length of bearing, and that it has never been for a moment contemplated to have a centre pier erected in the bed of the river. This would, of course, reduce the amount of pressure to only one-fourth of that on the whole span, and alters the very basis of Mr. MOTLEY's calculations. We think some of Mr. DE LA HAYE's suggestions well worthy of consideration; and, as the subject is of much importance at the present time, we give the following results arrived at by Messrs. FAIRBAIRN and HODGKINSON, in their experiments on the large model of the proposed bridges at Holyhead and Conway. In the first experiments, the sectional area of the bottom plate being 22½ square inches, of the top 24 in., and the side 10 in., a weight of 58 tons produced a deflection of 3·2 in. This weight was allowed to remain till the following morning, and the increase of deflection was found to be inconsiderable. In the concluding experiments, it was determined to load the model bridge till it was broken, and the following table exhibits the deflection corresponding to each load:—

Experiments.	Load in pounds.	Deflection.
1	31,612	0·70 inches.
2	83,310	1·91 "
3	117,336	2·77 "
4	138,255	3·17 "
5	139,597	3·38 "
6	143,352	3·48 "

And, last, with 161,760 lbs., or a load equal to 67½ tons, the tube broke. As much excitement exists in the public mind on the subject, a detailed statement of the length and weight of model, thickness of metal, mode of construction, &c., as it existed during the experiments of Messrs. FAIRBAIRN & HODGKINSON, would be highly interesting and satisfactory.

The awful calamity at Kirkless-hall Colliery, accounts of which we have given in former Numbers, is still exciting the most lively interest in the coal districts, and the heart-rending details appear to have at length roused the dormant feelings of our legislators. After the Haswell explosion in 1844, the Riscia in 1846, the great Jarroo calamity, and on other occasions, inquiries and legislative enactments have been promised; but no further steps taken. It is now, however, certain that something will be done—not inquisitorial powers given to parties, as proposed by Mr. DUNCAN'S Bill, which he very wisely withdrew; but the making certain acts—such as using gunpowder, naked lights, and other proceedings, which are known to be the cause of nearly all the explosions—criminal; and compelling the adoption of a system by the owners, which shall ensure perfect ventilation. On Tuesday evening last, Mr. HUME obtained leave to bring in a bill, by which it is believed some such regulations will be enacted, as giving a little better security, until the proposed measure can be matured for the next session.

The remarks, which we felt it our duty to make on the merits, or rather demerits, of Mr. DUNCAN'S Bill, in the Journal of the 26th June, we are happy to say, are acquiesced in by numerous parties connected with our collieries, among all classes, from the workman to the owner; and a letter from our respected correspondent, Mr. D. MURPHY, in another column, most ably bears out our views. Notwithstanding the assertions of a correspondent, who signs himself "Nemo," and who seems sadly galled at our observations, it is undeniable that perfect ventilation may be secured in all cases, and the lives of the workmen rendered as safe as under any other ordinarily dangerous employment—not by creating a host of needy and servile inspectors, but by rendering certain acts of commission criminal, and compelling, under the pain of heavy fines, the sinking shafts of proper diameter, preventing the upcast pit to be used as a drawing shaft, with other similar provisions. Sir GEORGE GREY had no objection to the bill, but would not pledge himself to any of its details, and we trust the hon. Member will frame a measure, which will meet the concurrence of all parties.

To return to the unfortunate accident at the Kirkless Colliery, we understand that the six bodies, which were left in the mine, have been recovered, and one more of the sufferers has died since our last publication, making 10 in all. This inquest was to be resumed last evening, and it is rumoured that Government intends sending down an agent to watch the proceedings;—the inquest on the body of BERRY terminated on Thursday evening, when, from the evidence, it appeared that the bodies of the six men were found close to where they had been at work; the bottom of a safety-lamp was also found, the top having been unscrewed from it; and it is conjectured that this was the cause of the accident. Mr. ROBERTS elicited from the witnesses, that although the owners preferred not to sanction the use of gunpowder, the drills for making the blast-holes were sharpened by their smith, and the men did not pay for it. The jury, after a consultation of ten minutes, returned a verdict of "accidental death." We sincerely trust, that the facts which have been, and still doubtless will be, elicited by this enquiry, will lead to the adoption of measures which will arrest the evil consequences of recklessness in the men, and cupidity in the owners.

In this day's MINING JOURNAL will be found a report of the quarterly meeting of the TRELEIGH MINING COMPANY; and, although the directors presented no report on the occasion, that of the agent, with previous ones, the statement of accounts, and the declaration of a dividend of 6*s*. per share, were perfectly satisfactory to the adventurers present. In our remarks on the proceedings of the meeting of the 4th of January last, we adverted to the impolicy of paying so small a dividend as 2*s*. 6*d*. per share, rather warmly pressed for by several shareholders, more particularly as the prospects were such as to enable the directors to all but promise a dividend of 5*s*. at the following April meeting. The result proves the correctness of our remarks, and that the directors were perfectly right in withholding so trifling a dividend. At the April meeting a dividend of 6*s*. was made; at the one now alluded to, another of 6*s*. will be divided after the first Monday in August; and from the present highly-satisfactory state of appearances of the company's property, there is every reason to hope that the same amount of dividend, or even an increased one, will continue to be made at the quarterly meetings.

EXTRAORDINARY EFFECTS OF LIGHTNING.—During the unusually severe thunder-storm on the morning of Wednesday last, an extraordinary circumstance occurred on one of the barges belonging to Mr. Hoppe, at Pigs' Quay, Blackfriars bridge. The barge was loaded with coal, containing as usual portions of iron pyrites; at some period during the storm, a current of electric fluid appears to have passed through the barge in an oblique direction; and, where it has come in contact with any of the pyrites or sulphure of iron, the latter has become converted into green sulphate of iron, or green vitriol of commerce. The line where the electric fluid traversed the coal, appeared charred, and Mr. Hoppe much regrets that the whole was not preserved in the state it was first found to have given an opportunity for scientific investigation. Here is proof that the metallic sulphure can be converted into a soluble metallic salt by electricity, and may induce further experiments on the subject of welding by that agent. A small piece of the extraordinary product may be seen at our office.

THE IRON TRADE OF AMERICA.

(From the letter of an American correspondent, dated June 15, to the Birmingham Journal.)

From a pamphlet just issued by G. C. Childs, Esq., of Pennsylvania, with reference to the iron trade of that state, I am able to furnish you with some statistical information, which may probably not be uninteresting to some of your readers. This work, which is a brief history of the trade, by an ardent advocate of the protection system, informs us that in 1766 there were shipped from Philadelphia, 322 tons of bar-iron at 26*l*. per ton, and 818 tons of pig-iron at 7*l*. 10*s*., and that the mere increase of the production of this metal in the Valley of the Schuylkill alone, during the last 18 months, exceeds the entire production of all the furnaces of Great Britain 90 years ago! Such at least is the statement given by the president of the Schuylkill Navigation Company in his report of the 4th May. By a report prepared by order of the Secretary of the Treasury, in obedience to a resolution of Congress in 1812, we learn that the aggregate number of furnaces in Pennsylvania, and the amount of their yearly product, in 1810 was thus—44 blast and 6 air furnaces, producing 26,878 tons, valued at \$1,201,343. The number of furnaces in all other states, from Maine to Tennessee, at the same time, was 44 blast and 26 air, producing 27,000 tons, value \$1,679,934. At the present, one-half of the iron produced in the Union is made in Pennsylvania. The discovery, six years since, of the method of using anthracite coal in the reduction of iron ore, was the event that completed the full exhibition of the mineral wealth of this state. In order to show the vast expenditure in furnishing facilities for bringing the iron and coal of the mountains to the seaboard, there are already completed 118 miles of railroad and 592 miles of canal, at a cost of \$21,332,000, which, with unfinished improvements, making a total value of about \$30,000,000; add to this also the cost of improvements constructed by private enterprise, and the whole will amount to \$80,000,000.

At a convention held by the Coal and Iron Association in Philadelphia, Jan. 9, 1846, it was stated by the committee, that there were in work 32 rolling mills and nail factories, also 64 forges, making an aggregate (inclusive of the old furnaces of 1842), of 316 furnaces, producing 968,056 tons, being an increase of old and new furnaces of 216,171 tons since 1842. The long-sought discovery made in 1839 of using anthracite coal for smelting in furnaces and rolling-mills, gave a new impetus to the business; it roused the energy of the bituminous coal proprietor, and introduced into the state the process of coke pig-iron, which has been so long and successfully practised in England. In 1841, under the Compromise Act, the duty on bar-iron was reduced 53 per cent., and on pig-iron 50 cents, below the duties of 1839. Owing to the over-production of iron in England in 1841, and the ruinously low prices obtained for it, an effort was made to induce Congress to prevent that act from going into effect, as the result of such a reduction of duties would paralyse the industry of this country, and ruin those engaged in this branch of manufacture. This effort proved unavailing, and the prices of iron declined from 25 to 40 per cent. American bars, in 1839 worth \$100 per ton, declined in 1842 to 75; blooms, from 75 to 38; and pig-iron, from 33 to 13. So universal and wide-spread was the ruin, that Congress was induced to pass the tariff bill of 1842, which has since so materially aided in extending the iron trade. Since that period there have been erected, and are now in blast, in Pennsylvania, 41 anthracite furnaces, producing annually 125,000 tons. It is only three or four years since the first bar of railroad iron was made in the United States: it is estimated that 60,000 tons will be produced during the present year.

So far as the ironmasters of Great Britain are dependent upon this country as a purchaser for their iron, this rapid and still progressive increase of iron-works must present subjects for profound reflection. While trade is good in England, American manufacturers need not fear their rivalry; at present prices they are able to compete successfully with the British manufacture, notwithstanding the decrease of the protective tariff. But as continental orders fall off, or the impetus now given to the trade by the construction of railroads subsides, and, in consequence, large consignments are made to this country on speculation, combined with increased production here, the interests of both must clash, and an era of low prices and mercantile disasters must inevitably ensue. It may be presumed that three-fourths of the American iron is used in the western states; a small proportion is consumed on the seaboard. This is owing to the difficulty and expense of transportation, the circuitous canal routes, and the high state tolls, &c., upon them, amounting in fact to a high tariff. But the west is discovering that it is able to make its own iron, and throughout the Ohio Valley iron and coal-works are springing up in all directions; these are small affairs at present, but there are many in course of erection. You may judge of their capacity by the annexed account of four, which have just commenced in Mahoning County, Ohio; they use raw coal alone:—

That of Wilkinson and Co., at Lowell. Their stack is 12 ft. across the bushes; had three tuyeres, now preparing for six tuyeres; is hot blast, and reports an average of five tons a day, soft metal, for a blast of four months. Ore yields about 30 per cent., requiring 3 to 4 tons of coal per ton of iron.

Warren and Co.'s furnace, Youngstown, 12 ft. at the bushes; cold blast, three tuyeres; makes soft iron, 4 tons of coal to 1 of iron; ore, 25 per cent.; weight of flux equal to ore; runs 4 to 5 tons a day.

Woods and Co., Youngstown, cold blast; 11 ft. 3 in. bush, 3 ft. at the trunnel head, in blast but a short time, and not yet (May 1st) regulated.

Redman and Co., Mill Creek, 10 ft. bush, 3 ft. at trunnel head, and small for 10 ft. down; runs 3 to 3½ tons per day; ore, 35 per cent.; 4 tons of coal per ton of iron, including the fuel for engine; cold blast; metal soft; 2 tuyeres. There is a rolling mill and nail machines at Youngstown, which work the pig of these furnaces. The workmen of some of the Virginia iron-works have struck against the employment of slave-labour in puddling, and also for an increase of wages. The owner of the Tregular works has informed them through the newspapers that as they have discharged themselves, he will dispense with their services, and put the slaves in their places. The matter is exciting some feeling, and the proprietor of the works appeals to the public to sustain him in resisting what he calls the "boldest attack upon slave labour, and the rights of the citizen, ever before made in a slave state." His appeal will certainly not be without the effect it is intended to produce, for these workmen are English—mostly Staffordshire men, and I regret to say their general conduct is not calculated to excite much sympathy for themselves, or to reflect much credit upon their country.

WOOD PATENT SUPPLEMENT.—Among the numerous ingenious inventions of the present day, we have during the week been favoured with an inspection of a noiseless wheel for carriages, patented by Mr. Andrew Smith, C.E., the galvanised iron and wire rope manufacturer of Millwall. The silent properties of this wheel are not obtained at the expense of appearances, nor by any additions which detract from the elegant appearance of the vehicle. The tire is composed of numerous layers of galvanised plate iron lapped together, and then re-galvanised in the mass, and which, when running over the stones, make no more noise than if running on a surface of sand. The nave, or box, of the wheel is lined with an elastic substance, which makes a perfect stuffing-box, and thus prevents any noise from the axle; and the whole is a most important addition to the many luxuries and comforts of life, brought about by the exercise of engineering talent.

LAUNCH OF TWO OF THE HOLYHEAD STEAM-PACKETS.—On Saturday last was launched from the building-yard of Messrs. Ditchburn and Co., Blackwall, two fine steam-packets, for the Holyhead and Kingston stations—one named the *Caradoc*, and built for the Government—the other (not yet named) for the Chester and Holyhead Company. Both vessels are very similar to each other in dimensions, form, power, tonnage, and draught of water, each being 660 tons, and 300-horse power. The *Caradoc* is to have Messrs. Seaward and Capel's direct acting engines—the company's packet Messrs. Maudslay, Sons, and Field's double cylinder engines. We look forward with much interest to the trial of speed with these vessels.

The *Express*, new iron steam-packet, of 600 tons and 160 horse-power, the first of a series building by Messrs. Ditchburn and Co. for the South Western Steam Navigation Company, made her final trial-trip, previous to being handed over to her owners, on Tuesday last; there was a numerous party on board, which she took to the Nore and back—making on her way half-a-dozen runs at the measured mile in Long Reach, averaging a speed of 17½ statute miles through the water; the wheel is about 19 feet from outside of float, the stroke 3 ft. 6 in., and made 42 to 43 per minute, draught of water 6 ft. 6 in.; she passed the fastest river boats in fine style. The *Express* is to be placed on her station in a few days, and the other vessels are fast progressing. The whole of the machinery for these packets are supplied by Messrs. Maudslay and Co., and are their patented annular cylinder engine, which appears, if we may judge by the *New Brighton*, "broad and bumpy" boats, to be equally efficient with the most perfect oscillating engine.

THE CHINESE JUNK "KEYING," now on her way to ENGLAND.—Capt. C. A. Kellet has kindly favoured us with the following account of the Chinese junk *Keying*:—The junk *Keying* left China Dec 6, 1846; arrived at St. Helena April 17, 1847; has had very light winds nearly the whole voyage, having been at anchor six weeks in the Java Sea and Sunda Straits, with light southerly and S.W. winds. Off the Mauritius experienced some very heavy weather on the 23d and 24th March; but found her to be a most beautiful sea-boat, and easy, never having shipped a drop of water since leaving China, or leaking. Her masts and rudder are of immense weight, being made of iron wood. Her rudder is hung to three large ropes, and drawn into her stern by two others, going underneath her bottom and coming over the bows, and when the rudder is down draws 23 ft., but when hoisted only 18 ft. It sometimes takes 30 men to steer her; but in fine weather, running before the wind, she goes so quickly that the tiller rarely requires to be touched, and then two men can steer her. She is built in compartments—having 15, several of which are watertight; she has a main deck, raised quarter-deck, two poops, and a raised fore-castle, with a high vessel above that again. Her main deck is arched. Her anchors are made of wood, and the shanks about 30 ft. long; the cables are made of bamboo, the ropes of bamboo, rattan, and Indian grass; she has three water-banks built on her decks; her sails are reefed by lowering the halyards, so that one man to each mast at the halyards can either reef the sail or take it in a minute; her stern and her bows are open, but she is so very buoyant that she never takes in any water at either end. Her main cabin or stowage is 30 ft. long, 23 ft. wide, and 12 ft. high, partitioned with various seats, bunks, &c. She has also six small cabins on the first poop, with the fore-house in the centre, in which a light is constantly kept burning. Her stern is 23 feet high out of the water. —*M. Helena Gossells.*

PROGRESS OF FRENCH MINING INDUSTRY.

(FROM OUR PARIS CORRESPONDENT.)

A few days ago, the contracts for the supply of considerable quantities of English and French coal to the Marine Department took place, pursuant to notice. The first batch, for which offers were received, was for 10,000,000 kils. of English coal (10,000 French tons, or about the same in English measure), was taken by Mr. G. Jackson, at 459,000 fr. (18,360/), to be delivered at Algiers. The other persons who offered were Messrs. J. Chapman and Co., at 513,000 fr.; Messrs. Mallet Frères, at 514,000 fr.; M. Maurier, of Havre, at 514,000 fr.; and Mr. Copley, of Dunkirk, for 492,000 fr. Offers were also received for the supply of 3,000,000 kils. of English coal from M. Hautier Fils, of Havre, at 469,500 fr., from Messrs. Gardet and Co., of Bordeaux, and M. Loelet, of the same place. M. Hautier having made the lowest offer, obtained the contract. The coal will have to be delivered at Tahiti and the Marquesas Islands. For a supply of French coal, delivered at Algiers, M. C. Dulras, of Dunkirk, demanded 54 fr. per ton; and the Grand Combe Company, only 48 1/2 fr.; the latter, accordingly, secured the contract. It will be observed, that the contract for the latter of the two batches of English coal, fell into the hands of a Frenchman. I should have thought that some English house would have contrived to secure it; for there can be no doubt that Englishmen would have contrived to obtain greater profits from it than any Frenchman can. The Marquis of Londonderry is again repeating his advertisements in the newspapers of his willingness to sell coal "of the best quality at the smallest possible prices."

The Company of the Furnaces of Bérard, known as Brissac and Co., have prolonged their existence for another year.

The examinations for the admission of pupils to the Royal School of Mines, will open on the 3d November. The qualifications required are to be well grounded in the elementary branches of some of the arts and sciences connected with mining. The education obtained at this school is both theoretical and practical, and is the best perhaps that any youth, desirous of himself for the mining profession, can obtain in Europe.

The Government has allowed the Northern Railway Company to convey large quantities of some descriptions of merchandise, and, among them, coal at less than the tariff fixed by the law.

A company has just been formed for working certain mines of lead, zinc, and copper, situated at La Perrière and La Condamine, commune de Laffrey, in the department of Isère, and for erecting and carrying on a metallurgical establishment at Vigille. The society is formed for 30 years, with a capital of 500,000 fr. (20,000/), which is not at present divided in shares, but is held by five or six gentlemen.

A question of some interest in the mining world has just been decided by the Civil Tribunal of Lyons. Some time ago, a number of persons agreed to form themselves into a company, for the purpose of obtaining from the Government a concession of the iron mines of St. Priest, and one individual was specially charged to take the necessary measures, in return for which a number of shares were awarded to him. After a time, disputes arose; and an attempt was then made to get out of the engagement that had been entered into with the individual in question, on the ground that it was illegal to form a company to obtain concession of a mine. The Court has decided, that so far from being illegal, the law is favourable to companies formed for that purpose—it being for the interest of the country that as much mineral wealth as possible shall be discovered.

M. Pellaprat, one of the accused parties in the case of the mines of Gouhenans, has, it is said, deemed it prudent to decamp, instead of standing the trial which comes on to-morrow. He it is, who is suspected of having acted as the intermediary between General Cubières and M. Teate, the Minister of Public Works—the former the suspected briber, the latter the bribed. This flight has increased the presumption of the guilt of the accused.

The St. Dizier letter of the 1st says:—"Fers laminés are at 380 fr. to 385 fr.; fers battus à la houille at 380 fr. to 385 fr., but some establishments demand 390 for the provinces; essieux étampés, 405 fr. to 410 fr.; bandages percés, 410 fr.; fils de fer, 5 1/2 fr.—all delivered at St. Dizier, with six months' credit, or 5 per cent discount. Affaires very calm."

The Grande Montagne Company advertises, that the shares on which the call of the second fourth has not yet been paid, will be sold at the Bourse within 15 days, unless the call be immediately paid up; the number of these shares is very inconsiderable.

The Company of the Coal Pits of Layon and Loire will hold a general meeting at Paris on the 25th July.

The Company of the Mines et Usines de la Méboudjah are convoked in general assembly for 30th September next. This company was formed two years ago, with a capital of 1,500,000 fr., for the working of some of the mines of Algeria. It was started with a tremendous flourish of trumpets, but ever since has been remarkably quiet. What it has done is a secret, but one may hazard a guess, that it has not done fortune. If this be so, the bad opinion which the *Mining Journal* has always expressed of mining enterprises in Algeria, will receive a remarkable confirmation.

An advertisement from the London management of the mines of the Asturias makes known to the French shareholders, that another call of 1/2 per share is required to be paid before the 4th of August next.

A petition was presented the other day to the Chamber of Peers from about 1300 of the principal inhabitants and merchants of Bordeaux, praying for the free introduction of iron, cattle, and food. Some of the free trade peers proposed that the petition should be referred to the Government, a step equivalent to pledging the Chamber to the free trade principle; but the Protectionists having opposed this, it was not carried into effect. In the course of the discussion, the Minister of Commerce was called on to declare whether the Government is, or is not, in favour of free trade; and he replied, that it was for protection—that it did not believe free trade to be a universal good, nor absolute restriction to be a universal good either. Exactly the answer that was to be expected from a *juste milieu* Minister!

Appropos of this excellent Minister, he has got himself into an awkward hobble, by its being proved that, during the time he has been Minister, the mercantile establishment (a cloth manufactory) which he founded, and of which he is the chief, under the name of "Cunin-Gridaïne" (father and sons), has had large quantities of railway shares awarded to it. This fact is of 10,000 times greater importance in this country, than it would be for a Minister of England to hold railway shares; for here the railways are awarded to companies by Ministers, and there is always more or less favour shown to the companies which succeed in obtaining them—so that in giving shares to the firm of Cunin-Gridaïne (father and sons), the companies may not unreasonably have calculated that M. Cunin-Gridaïne (the father) would use his influence, as Minister of Commerce, in their behalf. The worthy man has tried to get out of the scrape, by pretending that he has nothing to do with the transactions of his house in shares—that his interest is only in the manufacture of cloth—but the excuse is such sheer twaddle, that everybody laughs at it.

A Committee of the Chamber of Deputies has reported in favour of some rather considerable concessions being made to the Companies of the Lyons and Avignon Railways, which made bad bargains in taking the lines on the conditions laid down in the law. Among the measures, to which it is proposed to bind the companies in return for the concessions, is one to the effect, that the Avignon line shall be obliged to make a contract for the purchase of 6,000,000 rails within two months of the passing of the new bill. What can be the meaning of such a condition as that? Can it mean anything else than to put money in the purses of the ironmasters? Does it not hold out to them a direct premium to them to come to an immediate understanding to increase their prices, which, heaven knows! are already most exorbitant? If the Committee, which drew up such a strange condition, had been composed exclusively of ironmasters, one might understand the provision; but constituted as it was, it is difficult to ascertain what can have warranted, or even suggested, a clause so extravagant and so unjust. The Chamber of Deputies is bound to see that it is struck out.

The people of St. Etienne are still continuing their headstrong opposition to the great Company of the Coal Mines of the Loire. They have got one of the most eminent advocates of Paris to give an opinion to the effect, that the union in one concern of so many concessions as the company holds, is illegal, without the sanction of the State. But as the Government has not interfered against the company, it must needs be held to have sanctioned it. Besides, who enres a straw for lawyers' opinions? They are always what the people who pay for them, wish them to be. The St. Etienne journals announce the arrival in that town of two directors of the company for the purpose of making modifications in the working of the pits, with a view of satisfying, if possible, the public. They also state, that a judicial investigation into the facts alleged against the company is about to be made.

The railways now in course of construction require rails of greater weight

—37 1/2 kilogrammes per metre, instead of 30—than was thought necessary a year or two ago. The consequence is, that an additional expense of not less than 800/ per kilometre is thereby entailed on the companies.—Paris, Wednesday.

Belgium.—Some of the Protectionist journals state, that cast-iron is at this moment very plentiful; and they draw therefrom the conclusion, that the partisans of free trade, who think it necessary for the full success of our metallurgical establishments, that cast-iron from England and Scotland should be allowed to be imported duty free, or, at least, at a very moderate rate one, are decidedly in the wrong. I am not able to dispute that there may be at this moment an abundance of cast-iron for melting purposes; but, if there be, it is a mere accidental circumstance, and by no means proves that Belgium has enough cast-iron of her own to be able to dispense with foreign supplies. If it were not so, why should the majority of the metallurgical establishments be clamorous for the abolition of duties which prevent them from purchasing all the cast-iron they want in the British markets?

The Protectionists pretend that the recent and still progressing increase of metallurgical exports, is a proof that Belgium has no need to alter her tariff. But they shut their eyes to the fact, that an alteration of the tariff would increase the exports still more. And yet nothing can be plainer than that simple truth—for it is clear that the cheaper any article is, the greater is the sale it obtains; and the free introduction of foreign cast-iron would enable Belgium to manufacture, and consequently sell, a great many of her products a good deal cheaper.—Brussels, Tuesday.

MINING IN CORNWALL.

PRODUCE OF THE PRINCIPAL CORNISH COPPER MINES, FOR THE QUARTER ENDED JUNE 24, 1847.

Mines.	Ticketings.	Tons.	Amount.
Devon Great Consols	2937	22340 15 6	
Carn Brea	2600	18554 19 0	
Great Consols	2507	18927 12 0	
Great United	3011	15399 0 0	
Wheal Seton	1588	11064 2 0	
Fowey Consols	1755	10419 4 0	
South Carnon	1191	8467 6 0	
Par Consols	1265	7995 16 6	
Wheals Prosper and Friendship	1089	7553 10 6	
West Carnon	1081	7233 3 0	
North Crofton	1020	6321 4 6	
East Wheal Crofton	1078	6231 14 6	
Stray Park and Camborne Veah	1126	6197 16 6	
Travistock and Barrier	841	6139 3 0	
Tincroft	1358	5822 12 6	
South Wheal Francis	816	5734 9 6	
Tresavean	1250	5525 8 6	
Treleigh	761	4789 16 6	
Delcon	710	3656 4 6	
United Hills	844	3385 18 0	
Wheal Sisters	447	3062 2 6	
Perran St. George, Bolens, & W. Lelarge	761	3023 6 6	
Wheal Prosper	871	2991 16 6	
North Poole	387	2969 0 0	
Wheal Bussell	238	2842 12 0	
Graveler and St. Aubyn	369	1993 7 0	
Bedford United	239	1709 5 6	
Wheal Tremayne	275	1642 16 0	
Poldice	353	1577 17 6	
Trethellan	470	1496 18 0	
Holmshush	238	1495 4 6	
Condurow	230	1314 12 0	
Lanivet Consols	300	1457 12 6	
Alfred Consols	308	1386 17 6	
Wheal Comfort	418	1329 11 6	
Wheal Ellen	182	1132 2 0	
Levant	121	1059 5 0	
Charlestown United	58	978 15 0	
Wheal Rodney	230	908 14 0	
Wheal Valley	133	824 12 0	
Wheal Jewell	163	781 18 6	
Wheal Clifford	156	781 8 0	
Ting-Tang	178	733 4 0	
South Crofton	134	727 7 0	
Andrew and Nangles	135	716 18 0	
West Wheal Jewel	160	670 0 0	
Wheal Virgin	180	638 15 0	
East Consols	110	607 6 6	
Trenow Consols	99	589 13 6	
East Pool	258	586 18 6	
Wheal Agar	116	549 18 0	
Trotell	122	527 14 6	
Wheal Ruby	87	469 18 0	
West Wheal Treasury	92	461 9 0	
Hansen	90	459 0 0	
Botallack	95	438 0 0	
North Wheal Basset	92	420 16 0	
Trenow Consols	62	370 6 0	
Wheal Harriet	169	360 4 6	
Wellington Mines	53	245 16 0	
Redruth Consols	50	315 18 0	
West Trevelan	76	314 14 0	
Carn Perran	59	275 7 6	
Wheal Vyvyan	67	252 8 6	
Wheal Brewer	104	241 14 0	
North Downs	43	233 17 6	
Wheal Bury	58	223 1 0	
Wheal Jane	79	216 8 0	
Wheal Tolgus	40	166 0 0	
East Reliance	25	153 2 6	
Budnick	24	138 12 0	
Lewis Mines	13	109 17 0	
Wheal Gorland	14	91 14 0	
East Crowndale	18	91 6 6	
South Toward	23	90 4 0	
Wheal Abrahams	15	79 18 0	
West Basset	15	77 12 6	
Wheal Henry	12	72 10 0	
Wheal Prudence	13	68 6 0	
Wheal Catherine	11	66 16 6	
Godolphin	33	65 12 0	
Wheal Union	10	52 10 0	
Wheal Burrow	7	41 4 6	
Hallenbeare	7	31 6 6	
Rose-in-Yale	6	30 3 0	
Wheal Caroline	9	28 7 0	
East Crofton	5	25 2 6	
Nanterrow Consols	7	24 13 6	
Wheal Buller	6	19 6 0	
Penstruthal	4	19 5 0	
Wheal Keyle	15	15 2 0	
Wheal Prussia	3	11 19 6	
Pembroke	1	9 10 0	
Total	34	875	£204,662 4 6

The following is the quantity of Copper Ore, and Amount of Money, from the principal Mines of Ireland, for the Quarter—

Mines.	Tons.	Amount.
Berehaven	1537	£1780 11 0
Knockmahon	1072	7535 9 6
Holyford	127	2356 12 6
Ballymartin	290	1853 16 6
Lackenagh	28	317 16 0
Total	3054	£23,174 5 0

PROGRESS OF MINING IN FRANCE.—The French Government has for some time directed its particular attention to the mineral resources of the different departments (a detailed account of which has already appeared in this Journal), and giving the greatest encouragement to mining enterprise, not only in France and Corsica, but also in their possessions in Algeria, under the direction of competent engineers. It appears, that a company has been recently formed at Belfort (Upper Rhine), to resume the working of the ancient silver, copper, and lead mines of Giromagny. These celebrated mines, which had been extensively explored for more than three centuries by the Emperors of Germany, were presented by Louis the XIV. to his favourite Minister the Cardinal Mazarin, and worked by that statesman's family till 1791; at which period, in consequence of the Revolution, they were restored to the State. Since that time, numerous propositions have been made to resume their working; and, by a decree of the year 4, it was ordered that they should be proceeded with, on account of the Government, who resolved on establishing a Practical School of Miners at Giromagny, being the most favourable locality for this object; but the intestine disturbances, and the wars of the Republic and empire, prevented the realization of these projects. The question was again brought forward in 1809 and 1820, and each time adjourned by some circumstance, which prevented a concession being granted; and it was only in 1843 that these difficulties were overcome, and the grant allowed. The present company will not only have the advantage of the former works, but be enabled, at a very trifling expense, to explore the numerous lodes, which this rich mineral district possesses. They have already established furnaces for treating the copper, lead, silver (the galenas are all more or less argentiferous), and grey copper ore, which has been obtained from two or three lodes, are very rich, yielding from 700 to 1000 grammes of silver to 2 cwt. of ore.

THE METAL TRADE—DARTMOOR CONSOLS MINE.

The *Morning Advertiser*, of Wednesday last, remarks at some length on the annual returns of the imports and exports of metals, which we published in the *Mining Journal* of the 26th June. The writer observes—By this return we have, but for what purpose required we know not, a particular account of all the exports and imports of these very valuable metals—copper, tin, zinc, and lead—in the year ending 4th January. If no other use can be made of this document, besides comparing the quantities with the amounts of duties received at the Custom House, it may serve to show the state of our mining operations; and, perhaps, induce men of enterprise to redouble their exertions for the discovery of the mineral wealth of their own country, and so render us less dependent upon foreign supplies. It does not seem at all probable, that the quantities of each of these metals obtained in Great Britain, bear any noticeable proportion to those which remain, often unsuspected, in the bowels of the earth. Cornwall, for instance, is known to abound in copper—and Cornwall and Devonshire, particularly the tract called Dartmoor, in tin—add yet valuable as each of these is in commerce, arts, and manufactures, the products of the mines seem inconsiderable. Mr. McCulloch states, that the quantity of METALLIC COPPER yielded by the ore is generally 8 or 9 per cent. If the ore be commonly no richer than this, it is far inferior to some kinds of foreign ore. Thus, Italian, Cuban, and Chilian, yield from 15 to 20 per cent.; Dutch, Spanish, Italian, African, Cuban, North American, Chilian, and Pennsylvanian ore, are found which yield more than 20 per cent. These facts may possibly account for the importation of upwards of 50,000 tons, paying duties to the amount of 54,056/.

Much has been said of the production of South Australia, and apparently with truth; for we find that upwards of 3200 tons of ore were imported within the year. From New South Wales, 749 tons; and from Van Diemen's Land, 29 tons. According to the same writer, the quantity of copper raised from mines in Britain, in 1820, amounted to 8127 tons, which he values at 2,000,000/.

More seems to be mined now, because we export British copper in an unwrought state, to the amount of 2297 tons, which, with other exports in a wrought state, make a total of 15,717 tons.

Tin, for which Britain was famed in the most remote antiquity, though produced in the market in much smaller quantities than copper, is not an inconsiderable article of commerce; for our exports of British and foreign tin together more than double the imports. This ore is worth from 65/ to 80/ a ton, and the produce of our mines is about 4000 tons a year. In a wrought state, it has been known to obtain as much as 12 1/2 to 13 per cent.; but the average of 13 years, from 1722 to 1815, was Cornwall, for instance, in an unwrought state, and forming power and solder, in canning and in silvering glass, it is extensively employed in dyeing and calico-printing, in solution with muriatic acid.

If British COPPER ore yield only 8 or 9 per cent. of metal, while some descriptions of foreign ore are so rich, as to hold upwards of 20 per cent., there may possibly be little inducement to extend researches for the discovery of new mines. But so such objection appears to apply to tin, which, if more abundantly produced, would enter very largely into consumption for the manufacture of a great variety of utensils, to the advantage of the health of the people; and, moreover, it would become a far more considerable article of profitable export. Very recently Dr. Ryan, the celebrated chemical lecturer at the Polytechnic, analysed some tin ore, procured from a lode in the DARTMOOR CONSOLS MINE, and found it to yield the large amount of 34 per cent. of metallic tin. The destructive mine, it appears, was worked some years previous to 1844, at a return of upwards of 80,000/; but the operations were suspended, in consequence of some difficulties occurring with the lord of the manor about the renewal of the lease.

The "sett," as it is technically termed, is very extensive, being three miles in length and two in width. The differences with the lord of the manor appear to have been adjusted about the latter end of 1845, and under a favourable lease, at a rent of 3/ per annum, with a reduced royalty of 1-20th, the Dartmoor Consols Mining Company have commenced their operations with uncommonly favourable prospects, judging from Dr. Ryan's analysis, and the report of Mr. John Pail, of Tavistock, who regards the produce as the best grain tin in Devon, and the market value to be full 15/ per ton more than that of common tin. We have been the more particular in noticing this mine, on account of the superior quality of the yield of its ore, and the reasonable estimate of the quantity contained in the mine. It appears to us to bid fair to afford a considerable accession to our foreign exports, as well as to advance several of our arts, from the excellence of the metallic tin produced from its ore. As to the other metals, mentioned in this *Mining Journal* return, we scarcely think that much improvement will be made, unless, indeed, we shall happily discover a quality of zinc, which may compete with foreign.

THE TIN BOUNDS QUESTION.

COURT OF QUEEN'S BENCH.—JULY 7.

ROBERTS v. BRENTON.—This was an action of trespass and trover. The declaration contained two counts—in the first of which the plaintiff complained of having been unlawfully disturbed in the possession of certain land, known by metes and bounds; and, in the second, he complained that the defendant had carried away and converted to his own use certain ore belonging to the plaintiff. The defendant justified the taking, as the captain of the Galdina Mine, which was a mine worked by the Wheal Ruby adventurers, under a lease from the Duke of Cornwall—the land being in the parish of Windron, in the manor of Helston, of which the Duke of Cornwall was the lord. The object of the action was to obtain a right of way, which the law technically known in Cornwall as "boundaries," and which appears to be this:—If a person is an inhabitant of a manor where mines are believed to exist, and the lord of the manor (the owner of the soil) does not work the mines, the inhabitant may mark out a "bound"—a certain space, such as he believes himself capable of working, and such as he intends to work for his own benefit—and within such bounds all the ore found there belongs to him. The plaintiff had done so in this instance; but did not appear that in fact he had worked the mines; yet he contended, that the land having been once bounded out no person—not even the lord of the manor himself—could deprive him of his right to the ore found within the limits of such bounds. The legality and reasonableness of this alleged custom formed the subject of dispute at the trial, and evidence was given on both sides respecting it. In the end, the jury returned a verdict for the plaintiff, but gave judgment for the defendant on a nonsuit. The then Solicitor-General (Sir William Follett) obtained a rule to set aside this verdict, and enter a nonsuit, on the ground that the supposed custom was unreasonable, and, therefore, could not be supported in law; that it amounted to a claim to take a profit in agriculture, and that the custom of bounding out by implication, which the plaintiff claimed to possess the right a degree of liberty which it refused to the owner of the soil, since it permitted the right of the latter to be taken away if he did not dig the ore, while it did not state any limit of time within which the former must dig for the ore, or lose his claim of boundage. The case was argued some time since, and the court took time to consider the question.

Lord DENMAN delivered judgment in this case, and went very elaborately through the history of the rights claimed, and the conditions on which they could be exercised. He said, that the custom of bounding out on the part of public necessity, on account of public advantage, allowed an invasion of the strict rights of property. The owner of soil had no doubt, according to the law, a right to everything under the earth; but there were cases in which the law, taking notice of the fact that the owner of the soil did not work the mines beneath its surface, allowed another party to come in, and mark out by bounds on the surface the extent to which he proposed to work the mines below. This custom was established in favour of the public, that the public might not lose the benefits of the mines, which the law would not maintain if it were treated as a lawful custom affecting the rights of the parties. Here it appeared that the bounder had ceased to work the mine for years; and, therefore, whatever rights he might originally have obtained under the custom, he had now lost them, and could not claim to maintain this action against persons who had done what he had by bounding undertaken to do, but had for a long period neglected to do. The rule for entering a nonsuit must, therefore, be made absolute.

THE TIN TRADE.—In the *Mining Journal* of the 29th May, we published some particulars respecting the mineral resources of Malacca; the following additional information is from an American gentleman, who, in a laudable desire to attract capital, represents Malacca as a great tropical garden, in which the circumstances of the existence of natural advantages being so great as to leave nothing to wish for, as the right of "boundage," and to obtain as follows, regarding its mineral abundance:—"The stream tin of the peninsula we believe to be so abundant, that ages may elapse before it shall be necessary to have recourse to the expensive process of mining, properly so called. This stanniferous region is so great, that although it has long been wrought, not a single valley has been thoroughly worked, and not one valley in a thousand has probably been touched. The stream tin of Great Britain sufficed for the wants of centuries; and even with the vastly increased demands of the present age, we cannot predict the time when the alluvial tin of a region so many times greater than the stanniferous tracts of Great Britain will be exhausted. But it may happen, that veins exist in the rocks, of such extent, and so near the surface, as to admit of their being profitably worked even now. In this age of enterprise and speculation, it would naturally excite extreme surprise, and even incredulity, that a British colony on the high road of eastern trade should exist, forming an integral geological portion of the largest and richest tin region in the world, and itself freely yielding ore to every one who, with a common hoe, chooses to dig for it, and which yet has been utterly neglected by the mining capitalists of England. We believe to be, that there is much less practical knowledge in England respecting this treasure, any other part of the world. It has been the fashion to look upon the straits settlements merely as points of trade, and the facilities which their possession affords for the application of capital and skill to the peninsula, with all its agricultural and mineral treasures, have been entirely overlooked."

JOINT STOCK COMPANIES.—The Joint Stock Companies (No. 2) Bill (just prepared and brought into the House of Commons by Mr. Greene, Mr. Milner Gibson, and Mr. Parker) is entitled a bill "To amend an Act of the eighth year of her Majesty, entitled 'An Act for facilitating the winding up of the affairs of Joint Stock Companies, unable to meet their pecuniary engagements.' The proposed Act is to apply to 'all partnerships, associations, or companies, corporate or unincorporated.' The bill consists of 107 clauses, but its leading features may be shortly described. The Court of Chancery is proposed to give the necessary directions for winding up the affairs of partnerships and companies. Those may petition under the Act for the winding up, who claim or allege to be contributory of a company, whether an officer thereof or not, and also any person alleging himself to be a creditor of the company. The petition is to state the quality of the petitioner and grounds of application; and the grounds of application for dissolution and winding up are these:—Declaration of insolvency, judgment against the company, decree or order against the company, action against a member for the company's debts, and creditor's affidavit of debt and writ of summons. The petition is to be advertised in the *London Gazette*, and served; and the Court is to have such jurisdiction thereon as on a suit duly instituted. The Court may order further service or dissolve the company (except so far as may be necessary for the purpose of winding up its affairs). Power is proposed to be also given to the Court of Bankruptcy to direct a petition for winding up a bankrupt company under this Act; and no such petition, nor order thereon, will require to be advertised. The winding up is to be conducted on the principles of the law of merchants; and the Master is to appoint an official trustee, who is to have all the powers of a trustee in bankruptcy, as to any estate vested in him, and who is to be indemnified, &c.

COLLIERIES.—In the House of Commons, on Tuesday evening, Mr. Hume (in the absence of Mr. Duncombe) moved for leave to bring in a bill to prevent the use of gunpowder and candles in collieries. Mr. G. Hume had no objection to the introduction of the bill, but would not, however, pledge himself in the slightest degree to its provisions. Mr. Hume explained that the bill was drawn up in accordance with the recommendations of the gentlemen appointed to inquire into the subject.

Original Correspondence.

GOVERNMENT INSPECTORS.

SIR.—The late railway accidents have scattered, and justly so, great distress and alarm; but, from the forehead of this adversity, we must endeavour to extract the precious jewel; nothing can be lost which may serve us to establish a TRUTH. Your talented correspondents and the public now feel the invincible fact that, in Government inspectors, there is no infallibility. Inspection of railroads is of the simplest kind, and the most justifiable for the warrant of such public security; but even here it fails. How irrevocable a blow has been then received against that novelty—the inspection of private mines; and it occurs at that fortunate time when the bill of Mr. Thomas Duncombe has done all that is possible to heap ridicule on absurdity. No greater abortion—and that is saying much—was ever brought before a popular assembly. One great object it has effected—exposing the utter ignorance of the concoctors of this would-be-styled reform. Mr. Strutt's late railway affair has 10,000 per cent. the advantage of this curious ingenuity. I have stated, it may statistically be proved, the casualties in mines are less proportionally, than in any dangerous calling; were it not that of the accidents in mines there is one cause not totally dependent on the habits of the men, we had never been troubled by this agitation. How would it be met were a board-a-ship inspection forced upon the navy, where captains must submit to parasites, and at their word put about the helm in a storm, or haul-to at an inspector's pleasure? If we cannot perform our own duty, who else can? In the ventilation of a mine, something does depend upon the masters, but very far from all. Carelessness is the principal evil; and to follow the analogy, the crew of an extensive mine cannot be perpetually in the commander's eye. The dreams of borough Members are not experience. The case named lately by Mr. Darlington, is a sample of what we are most familiar with—falls of roof, or coal, through hardihood. These, year by year, destroy more lives than inflammable air; but they do not meet the public with the éclat of an explosion. If projectors would reflect, but that is not convenient, what can be done, and what is impossible, they would rest from their vain labour. These catastrophes of hardihood proceed, as another correspondent has remarked, from the assumption of manliness. Energy in daring is an absolute part of resolving on hazardous occupation; it is a total vision to anticipate that we can, in all cases, rein in this boldness by perfect circumspection. To quell it, would only establish timidity on the opposite extreme; all who know anything of cones of danger, are aware that fear is more fatal than even rashness. The life of man hangs betwixt extremes. That every person will realise the golden path, is a very idle hope; and, therefore, the sweeping blame of that fearlessness, which, as essential, has far more good than evil, is entirely in error. The agitating job propounder feeds upon the accidents that flesh is heir to. Is there no bill for the inspection of powder-mills? This would prove too limited a field for the appointment of sub-inspectors, per Secretary of State, ad libitum. Admit the principle of taxing private interests for such schemes, where will it end? It is the element of the male character to have pride in disregarding risks. It is to be wished law creators had some experience of a mine. In 100 accidents 99 are the act of a presuming man. Most justly another of your correspondents states, that calamities increase with measures of security, where caution is disarmed by mere presumption. Severe penalties, for disobeying the slightest regulations of a mine, is the only effectual remedy to produce habits of self-regard. What avails directing tinklers after the act? Has not the man death before him, yet he performs the act? Strict discipline in small details alone can be of use to prevent habits growing to that size, where penalty is hopeless. By a law of Nature, the miner is confronted with terrific death. What more can laws of parchment do? Strict penalties to establish that obedience, which will prevent the habits of mischief, it is useless to revenge, joined to centralise institutions by the mining interest; to record and disseminate improvements, are the only measures which can effect such good as it is possible in the nature of things to accomplish.

London, July 7.

MR. GIBBONS'S VENTILATION, &c.

SIR.—Nothing can be more repulsive to the well-informed mind than the constant, reiterated, and incessant tirade which a correspondent of yours directs against science and its members. Frankly, Mr. Editor, I am disgusted. What is science? The knowledge of an enlightened mind in operation, and practically employed and applied. If that individual, whose sneers are beneath contempt, has not been blessed with the benefit of education, and owes his escape to the peradventure of fortune, what right has he to assail those who are providentially more highly favoured, and who work by the light of the sun, and not by the occasional and ominous meteoric glare of the Will-o'-the-wisp, which may lure and lead to destruction? He, at least, can be no more a judge in this matter, than the blind man in forming an estimate of the iridescent beauties and glories of the rainbow. It reminds me of the fox in the fable, who, having lost his tail in a trap, counselled his fellows to get rid of theirs. I am sure that your correspondent, Mr. Henry Johnson, who seems "to think more highly" of himself "than he ought to think," is very much in the condition of the knave on the chariot wheel, when he exclaimed, in its puny feebleness, "What a dust do I raise!" The motive may well be suspected when the attack is personal; but I believe his furious onset is as unfelt as the pelting of the hail storm by the Monument, at London-bridge.

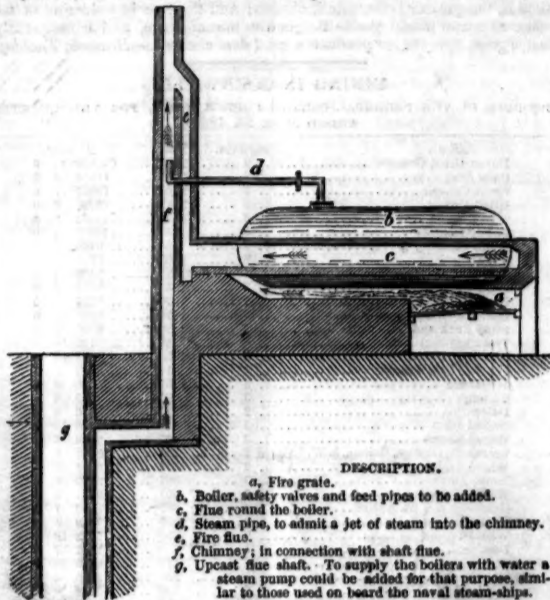
The "safety lamp" ought to be the occasional auxiliary, not the constant companion, of the miner. Where it is in incessant requisition, the miner breathes an atmosphere fatally destructive to health. We have had more than enough of lamps. Let us look at something higher, and probe the system to the quick—it is rotten at the core. *Entre nous*, I counsel you, as a friend, not to become the cat's-paw of any individual lamp—*Ponderibus liberatus suis*—and they will find their proper level. Let the axe be laid at once to the root of the upas tree.

I honestly confess, that I am the friend and advocate of Mr. Gibbons's system of working and ventilating mines. It is not in the isolation of any individual part whatever of his scheme that the excellence of his system consists, but in the combined operation and aggregation of them all. I have said that no system of working mines is correct in principle, or admissible on scientific grounds, which does not admit of, or provide for, a sound and thorough ventilation, and free escape of the gaseous emission from the coal field. A correct system of working coal must be combined with an efficient system of ventilation, and both must stand or fall together. We have already seen that Mr. Gibbons provides a way of escape for the hydro-carbonate, or "fire-damp," tending upward, founded on natural laws, and its low specific gravity. The propriety and excellence of this provision cannot be disputed, because self-evident, and fraught with all the force and power of demonstration. Again, another of Mr. Gibbons's axioms—for they appear to me to be axioms on which his system is founded—is, that nothing should interfere with the free descent and free egress of the atmospheric current, or intercept its circulation through the air-avenues and passages of the mine. This consummation cannot be realised by the common practice of working the coal-field, or ordinary ventilation, if it deserves the name, which is in truth a misnomer. The ascent and descent of corves, &c., are ruinous to anything in the shape of ventilation, aggravated by the "thousand and one" brattices, trap-doors, and stoppings, which amount in their totum ensemble to an extinguisher. Multiplicity of pits merely—may even aggravate the evil, by producing conflicting currents, which should invariably be allowed to tend unimpeded in one uniform direction—this is a part, and an important section, too, of Mr. Gibbons's arrangement. If the upcast and downcast shafts be of precisely the same depth and same diameter, there can be, *ceteris paribus*, no ventilation whatever, because the two atmospheric columns, resting on the same basis or plane, mutually counterpoise each other. What is termed the "downcast shaft" may, on any contingency, become the "upcast," as far as concerns the transit of the air current. What wonder, then, that, in such a case, the pits should occasionally "light"? The phenomena are entirely equivocal, and dependent on the mere fortuity of meteoric influences, such as storms, and other atmospheric disturbances. When we enlist the auxiliaries of mechanical contrivance, or invoke the aid of fire, the case is essentially altered; but in their natural condition, the question is a thing of "chance medley." Let one of these columns be extended in its length by a chimney, and the case is entirely changed—for, circumstances being otherwise the same, that necessarily becomes the upcast shaft for the ascent and escape of the air, and the interference of meteoric influences will be, in a great measure, if not entirely, paralyzed. Surely, it will not be contended that a chimney may be dispensed with in the case of the factory, or in our domiciles? I, at least, always took it for granted, that it was an essential and necessary adjunct to the furnace, or the fire-place. The value of the chimney would, no doubt, be infinitely extended by the rightly-arranged superaddition of fire, and Mr. Gibbons by no means ex-

cludes its aid, though he would assign it its proper place. It has been too often applied injudiciously, and out of place, and been mischievous, rather than otherwise. It would ill become me to enter into detail, with their subordinate relations, on Mr. Gibbons's method of working the coal-field. It cannot be in better hands. I, therefore, leave the question at rest on its own intrinsic merits, because I believe them to be based on solid grounds. When a savant once proposed his friend for admission as an academical, all exclaimed, as by common consent, "Qu'a-t-il écrit?" The savant calmly replied—"Messieurs, il n'a rien écrit; mais il a beaucoup fait." If he has written but little, Mr. Gibbons has written to the purpose, and done much.—J. MURRAY: Portland-place, Hull, July 3.

VENTILATION OF MINES.

SIR.—Having been twice called upon by your correspondent, "Black Diamond," for further information respecting the system on which I propose to construct the rarefying furnace for ventilation with the flue, as proposed in my sketch in the Journal on the 8th May, I have to remark, that the furnaces used at present to effect that object might, no doubt, be greatly improved; but the one I should consider the most effective for that purpose, from known laws of Nature, is shown in the accompanying diagram: it will be observed, that not only the heat of the furnace is brought into action, but an additional heat is occasioned by a jet of steam, which is passed from the boiler into the chimney.



DESCRIPTION.

- a. Boiler, safety valves and feed pipes to be added.
- b. Fine round the boiler.
- c. Steam pipe, to admit a jet of steam into the chimney.
- d. Fire flue.
- e. Chimney, in connection with shaft flue.
- f. Upcast shaft.
- g. Steam pump could be added for that purpose, similar to those used on board the naval steam-ships.

I am not aware that any suggestion of the kind has ever been laid before the public; and, therefore, I leave it for the consideration of the "Black Diamond," and others of your readers interested in the subject. I also stand charged by "Obadiah," with merely advancing what has been in use in the shallow works in Shropshire for the last 100 years: now, Sir, I hope our friend will state, through your Journal, where there is one single shaft in the shallow works, at or near Lawley Bank, which has a flue carried down parallel with the shaft; or where there is any thicket that requires top ventilation in that part of Shropshire. My youthful and limited experience remains to be further tested.

London, July 7.

VENTILATION—MR. G. SHEPHERD, C.E., AND MR. T. DEAKIN.

SIR.—Your correspondent, Mr. Deakin, wishes me to give him some information respecting the various methods of ventilation and mining on the continent. All the coal-works that have come under my notice, are on a scale too insignificant to comment upon. Our continental neighbours would be but too glad to have the opportunity of attempting improvements on the English system of ventilation. So far as my knowledge extends as to the management of the gold, quicksilver, and salt mines, I will most willingly accommodate that gentleman: these works are chiefly in the hands of the respective Governments. The precautionary measures taken by Austria and other foreign Governments, relative to the appointment of suitable persons for their management, are highly creditable to them. Although the Austrian Government have very few mines, they have mining institutions at the mines, where the pupil pursues his studies practically, and advances in rank similar to a military man. Mr. Deakin must know, that France also has *L'Ecole des Mines, à Paris*. A person that can only read and write a little, is never trusted with the charge of workmen (*à la Mar. Darlington's principles*), but persons who have received an education suitable to the duties they have to perform, as regards the laws of Nature's elements they have to contend with, and also practical mining, as laid down in their instructions by the superior officials of the Government. I am well aware that no expense is spared in order to render the work safe and even comfortable for the workmen. The wages of the miners employed are not more than from 8d. to 1s. per day; yet it will be found that these men have received a most liberal education, provided at the Government expense; and, in addition to this, the miners are allowed half-an-hour morning and evening, during which time they attend their religious duties. The wife and husband may be seen kneeling together previous to his descending the works in the morning. I have often remarked the contrast between the Austrian miner, and the reckless, thoughtless ones of England. Now, Sir, as perhaps I have satisfied Mr. Deakin as regards foreign management of mines, I will then, with your permission, proceed to make a few remarks on the anecdote in that gentleman's letter of last week. I consider nothing can more fully develop what "practical" men some of the coalmasters are: if the owner of the colliery referred to by Mr. Deakin, had been a practical man, he must have been aware that that person, with a mechanical knowledge only, could in no way be conversant with colliery works. Such a person would be as ignorant of mining operations as the common workman would have been in the creation of the forge and rolling-mill—but, at all events, he paid for his whistling; and it is quite evident, that he had got more money than brains. But can it be possible that such ignorance is found among what anyone would suppose to be experienced men, as stated in that gentleman's letter? If such is the case, the sooner a Mining Institute is formed—may, a common school—for the education of such people, the more credit it will be to the mining community; for, between the practical knowledge of such coalmasters, and the utter ignorance of the ground bailiffs regarding the laws of Nature, the working colliers apparently are doomed to continue in their present position, with very little hopes of an elevation from their degraded and exposed state.

In my opinion, Mr. Deakin's letter is a very clear evidence that a great reformation is required in the mining districts, for the protection of the working classes. Mr. Darlington may well remark, that the coalmasters are sometimes troubled with a nervous complaint, and do not like to descend at all times to inspect the mines personally; I suppose Mr. Deakin is a little troubled with the same complaint at times. As regards Mr. Gibbons's system, Mr. D. asks, what practical colliers have learned from theoretical correspondents, who cannot comprehend the difficulties attending old collieries infested with hydro-carburets? The coalmasters are equally ignorant of these difficulties, until they are brought to their senses by the workmen suddenly breaking through into old works; and the result is, a complete roasting of the unfortunate workmen. Then comes the old story—"nobody was aware of it." Is this practical mining? No; I consider it gross ignorance, and sheer neglect of the coalmasters, trusting the surveying of their works to the practical collier, who can only "read and write a little," with his knowledge of plans and sections. How often has this been the case; and how many hundreds of our fellow-creatures are yet to be scorched alive from the coalmasters being ignorant of the extent of their workings? Time will reveal this secret to the public.

An evidence I heard the other day in the Court of Queen's Bench, in the trial *Hilton v. Granville*, where one of the witnesses distinctly stated, that he and the ground bailiff were dialling the works in question on the surface; but they happened to come up to a row of houses, when they were obliged to stop, because they could not get any further—the ground bailiff not knowing how to carry his operations any further.—G. SHEPHERD, C.E.

ON THE CALCINATION OF IRON ORES.

SIR.—I take the liberty of intruding a little upon your space with a few observations on the calcination of iron ores—an operation which, in my opinion, has not been regarded hitherto with sufficient attention: I think it must be admitted that it is an important preparation for smelting. A question arises, to what extent should it be carried? Another then suggests itself, can it be carried too far? Upon these points I give my opinions; but I must beg it to be understood, that I do not advance them in any dictatorial spirit, but with the view of having them refuted, if erroneous. Speaking of the common iron stones, the siliceous and argillaceous ores of South Wales, I consider they should be burnt to a bright red, or a pink or yellowish red, according to the variety of the stone, and that the mass should be changed in colour throughout, but that fusion should be carefully guarded against. When ores are allowed to run together in calcining, it strikes me that it must impart a tendency to the iron of the ore to form cinder in the furnace, or to the iron itself something of the properties of cinder pig-iron—great fusibility and brittleness. I refrain from hazarding any opinion as to the causes which influence the variations in quality of pig or cast-iron. A long and interesting correspondence has appeared lately in your columns upon this subject, which gave me great pleasure; still, I must confess, it has left a feeling of disappointment—much science, research, and ingenuity displayed, but the ultimatum still inconclusive and unsatisfactory. In the ordinary modes of calcining ore, or mine, in kilns or heaps upon the ground, the operation must be affected by every change of wind and weather—at one time calm, at another a gale of wind blowing; while every change of wind must have some influence. Under such circumstances, it is impossible that the operation can go on with any regularity, or be at all under control. I suggested, some time since, the use of Kymer and Leighton's patent grate for calcining mine. I fixed one with a piece of common walling connected, against which a heap of mine was thrown up. I made an arrangement for drawing out below the fire that portion of the mine most immediately acted upon by it, the ignited gases only being driven through the mine by a fan blast. The plan has answered admirably, and the rough apparatus I fitted up is still at work at the Gwendraeth Iron Works, in this county. Parties who at first opposed, condemned, and ridiculed it, now speak of the plan with the greatest approbation. I have had no experience in treating blackband iron ore; but a gentleman, well acquainted with that ore, who has seen my plan of calcining, says that it is just the thing wanted for calcining blackband; that, by their present mode the ore runs very much together, requiring to be broken up with sledges, which he considers mine would prevent. Should my idea, as to the effect of the fusion of ore in calcination, be correct, the adoption of this plan of calcining blackband may lead to a great improvement in the quality of Scotch pig-iron. In your quotations of the prices, in last week's Journal, I see a difference of 2l. 2s. a ton between the highest Welsh iron and the lowest Scotch—a wide margin, and a great inducement to attempt some means of improvement.—T. H. LEIGHTON: Llandeib, near Llandilo, July 3.

COPPER WORKS—NEW BRANCH OF MANUFACTURE.

SIR.—I have been much surprised that chemists have never attempted to convert the smoke from the copper works here into some saleable commodity. It looked to me something like a nuisance; but the inhabitants say it is no such thing—they rejoice in it, and say the neighbourhood enjoys a state of the most perfect salubrity. I take advantage of the opportunity your columns afford, to suggest a new branch of manufacture connected with copper smelting. Steam, applied to a metallic sulphuret, produces ammonia. At present, a large quantity of sulphurous acid is evolved from the copper works—these two combined form sulphate of ammonia. I think a good chemist might convert the former into the latter, which is a valuable salt, and may be very extensively used in the arts and manufactures. Instead of treating the whole of the raw ore with air for calcining, part should be done with steam to attain the object I have in view. The rest will be merely a matter of arrangement.—JUPITER AMMON.

Swansea, July 5.

THE IRON TUNNEL ACROSS THE MENAI STRAITS.

"Voyez si mon secret n'est pas en bonnes mains."—DEBOUTCHES.
RESPECTED FRIEND,—I suppose that T. Motley has been misinformed in respect to the dimensions of the Menai Straits Tunnel, and also as to the form; the tunnel is not 30 ft. in diameter, but only 15 ft.—that is, only for a single line of railway; but the whole of the details have never been laid before the public. Perhaps the following statement of facts may not prove uninteresting to the readers of the *Mining Journal*, as they may throw some light on the subject. In the summer of 1844, a copy of my plan for passing rivers and channels by means of wrought-iron tunnels, was placed in the hands of G. Stephenson; the papers were accompanied by a request, sanctioned by some highly-respectable parties of Liverpool, that he would pronounce his opinion on the merits of the invention; but, for some reason known to the "eminent engineer," I received no answer whatever, nor were the plans returned, and, of course, I concluded that his engineering did not think it worth while to trouble himself about the inventions of others, and that I must apply for advice in another quarter. Six months after this, G. S. proposed to construct a wrought-iron tunnel over the Menai Straits, the tube was described almost word for word as in my plan, which was in his possession; there was, however, one modification—it was to be suspended above the water. The "eminent engineer" had not evidently lost sight of the words which I had used in explaining the possibility of modifying the invention for different localities; they were as follows:—"I do not mean to say, that this plan is perfect in its present state—it is, undoubtedly, susceptible of numerous modifications, but it may, at least, form a stepping-stone to a plan which it will be possible to carry out." After the tube had been fixed out from the water, I sent a paper to the Editors of the *Liverpool Mercury*, which I afterwards sent to G. S., and in which were the following lines:—"One proof that G. S. has borrowed the idea from my plan is, that he proposes to construct the tube in the same form as if it was to be placed on the bed of the water;—that is, the rails are to be placed inside; this in my opinion, does not show a vast amount of judgment on the part of the engineer, as it would be very possible for the trains to break the flooring—while the roof would remain uninjured. I would construct this tubular bridge in the form of a cylinder, and place a platform on the top, over which I would lay the rails, then place a number of iron columns inside to support the platform. Will G. S. think this worth accepting? I hope, if he does, he will, at least, acknowledge that he has borrowed it from me." (Of course I received no answer to this paper; but, at the same period, a paragraph went the round of the press, to the effect that G. S. had abandoned the idea of constructing an iron tunnel, and that two brick arches would be constructed instead. No contradiction to this assertion was offered until about six months after, when it was announced that it was not true, and that G. S. had never abandoned the thought of constructing the tube: this *ruse de guerre* will be, of course, easily understood, but this was not the conclusion of these clever tactics; the public was informed that Fairbairn and Hodgkinson had been instructed to make experiments on the strength of differently-shaped tubes, and, week after week, a statement was sent to the papers, to the effect that the rectangular tube was far stronger than the cylindrical; this, of course, was generally thought to be true, and the result of deep research on the subject, particularly as Fairbairn was sent to the British Association, at Southampton, with sections of the tube, which were exhibited to Prince Albert, the rectangular tube being explained by Fairbairn as infinitely stronger than the cylindrical; but, soon after this, the scene shifted; the public was informed, in a few weeks after, that other experiments having been made, the cylindrical tube was found by far the strongest! This last assertion was not, however, transmitted to the extent of the others; the erroneous statement was thought worthy of being published every week for more than two months, each statement being the result of distinct experiments; but, when the true statement was sent in the world, no bombastic explanations accompanied it—it was just shown to the world, and as speedily "hugged." A vague description of the new plan was published, by which it appeared that the tunnel was to be constructed in the form of a double-barrelled gun, the rails being laid on a platform, inside of the upper tube, which was to be of iron one-fifteenth of an inch thick—so that the trains were not to be placed inside, as originally proposed. I believe it has never been stated, what are to be the functions of the upper tube, whether it is to add to its rigidity (?), or simply to be used as a tent to keep off the sea-breeze from the third-class passengers. At all events, a Frenchman, who would hear these details, would exclaim, *c'est une véritable farce!* I do not know if G. S. intends to send Fairbairn to the British Association, at Oxford, to inform the members that "a change has come over the spirit of his dream," or that the thought of the rectangular tube being the strongest was "a mistake;" but, whatever he may do to enlighten the public mind on the subject, it is probable that, when future assertions will be given, as the result of experiments, many persons will inquire the "wherefore, why," in order to hear, if possible, the "because," as essential to not swallowing those wholesale assertions, as *essence of gunpowder*.

But now, as regards the strength of the tunnel, I must confess that I have not the fears of T. Motley. The two main divisions are 450 ft. in length each, and are supported on a pillar, built on a rock, in the centre of the straits, and on other pillars built near the shore; besides these divisions, there are short divisions to connect the main tubes with the railway on each side. A much greater quantity of iron is required than T. Motley estimates. It has been stated, that no less than 8000 tons will be required for the Menai and Conway tunnels; but, then, if this adds to the weight of the tube, it will add to its rigidity also. The main question is, whether it will bear the concussion produced by the locomotive when at a high speed, each stroke of the piston acting similarly to the blows of a steam hammer, on a small space, at the same time. A writer in the *Manchester Guardian* says, that the effect of concussion on wrought-iron is to destroy its malleability, and that in the lapse of time wrought-iron will become as brittle as cast-iron. These results can, I believe, be obviated by another modification; and as I have been favoured with a communication from the Admiralty on this subject, to whom I have submitted this proposition, G. S. will, perhaps, consider this modification as deserving peculiar attention. I do not know that he need be particularly quiescent about making use of it, for the purpose of lengthening the handle of his name.

The iron platform of the tunnel being completed, I would construct a timber platform over it. It should be of light wood, such as pine, and firmly bolted together, and planked over. Over this I would fasten a layer of vulcanised India-rubber, of about 2 in. in thickness, and over that substance another platform, similar to the under one, the upper planks being laid across, and fastened together with marine glue; on this upper platform I would lay the rails. It will be at once evident, that every blow produced by the piston of the locomotive would be neutralised, by being distributed on the whole surface, instead of being applied on one narrow spot, at the same time. I can conceive that if the

MINING ADVENTURERS' SUBSCRIPTION ROOM, ORIGINAL REGISTRY OFFICE FOR THE SALE AND PURCHASE OF MINING SHARES.

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ASTURIAN MINING COMPANY.—Notice is hereby given, that the SHARES upon which the CALL, due on the 1st of December last, has NOT been PAID (the Numbers, which are herewith published), will be FORFEITED within seven days of the date of this advertisement, and SOLD for the benefit of the company, unless the call, with interest, be paid on or before that date.

Nos. 21 to 30, inclusive.	Nos. 1711 to 1720, inclusive.
" 81 to 110 "	" 3361 to 3430 "
" 786 to 800 "	" 3441 to 3460 "
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And Notice is also given, that the Numbers of the shares liable to forfeiture for non-payment of the call, due on the 6th of April last, will be published on the 15th inst., and forfeited, unless the said call, with interest, be paid on or before the 31st inst.
By order of the board, K. MACKENZIE, Secretary.
Offices of the company, 9, Abchurch-lane, July 9, 1847.

IRISH WASTE LAND IMPROVEMENT SOCIETY, 2, ST. MILDRED'S-COURT, POULTNEY, LONDON.

Notice is hereby given, that a SPECIAL GENERAL MEETING of the shareholders of this society will be HELD at the King's Head Tavern, in the Poultry aforesaid, on Tuesday, the 13th of July next, at Twelve o'clock precisely, to lay before them the state of the society's affairs, and to consider the best course to be pursued for the future.
By order of the court of directors, FREDERICK FREY, Secretary.

STRONG MIXING PIG-IRON.—THE YSTALFYFERA

IRON COMPANY beg to solicit ORDERS for their ANTHRACITE PIG-IRON. This iron mixes well with Scotch pig—imparting to it strength and elasticity, and receiving from it a portion of its softness and fluidity. No. 3 pig is recommended for mixing with soft iron—Nos. 1 and 2, for machinery castings, requiring great soundness and strength. At this period, when cast-iron is so much employed in the construction of bridges and other buildings, requiring all the strength and elasticity which the best mixture of metal will afford, it may be interesting to call attention to the characteristics of ANTHRACITE PIG-IRON, as ascertained by that great practical authority, the late DAVID MURPHY, Esq., M.C.E.:

"It greatly exceeds, in strength, in defective powers, and capacity to resist impact, any iron at this time manufactured in the United Kingdom."

"It now only remains for me to mention a property peculiar to this iron, which was noticed at the time I made the trial experiments, four years ago, but which has been more fully developed in those more recently made. The property referred to is one of great springiness, or elasticity, which communicates a tendency to the bar, in deflection and breaking, to resume its rectangular form. Bars that had obtained a permanent set of 2-10ths, when afterwards broken, presented but a slight deviation from a right line; and, in no case, did the curvature exceed one-fourth of a tenth."

"It was also remarked, that most of the fractures, in breaking, presented a regularity of grain throughout, resembling the structure of unhardened steel."

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Dated June 23, 1847.

WHEAT TRESCOLL MINE, NEAR ST. AUSTELL.

This valuable MINING PROPERTY, that stands without an equal in this part of the county of Cornwall, with its EXTENSIVE SETT, is now ON SALE: and to facilitate which, a sample of its Tin Ores are being exhibited for a few days, at 5, Whitefriars-street, Fleet-street, which, for size and richness, cannot be equalled by any in London (the British Museum included), to give a faithfully true description of these stones would be perfectly absurd, as no one would believe such a statement; the proprietors, therefore, respectfully beg to invite the public to come and inspect them, when a full description will be given. The engineer of a celebrated adjoining mine is in attendance, from Ten till Four, for that purpose: the object being to make the public acquainted with the quality of the ores, and then proceed to form a company on their merits alone.
Apply to C. S. Richardson, Commercial and Mining Agent, 5, Whitefriars-street, City.

NORTH WALES MINING COMPANY, COUNTY MERIONETH

UPON THE COST-BOOK SYSTEM.
Divided into 12,500 parts, or shares, with a deposit of £2 10s. per share.

By a clause in the Cost-book the shares are limited to £10 each, but it is not anticipated that more than £5 per share will ever be required; and no call beyond the original deposit of £2 10s. per share will be made, until after a dividend shall have been declared.
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THE RIGHT HON. LORD VISCOUNT LAKES, Gloucester-place, Portman-square, and Aston Clinton, Bucks.
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(With power to add to their number).

PRINCIPAL MINING CAPTAIN—Capt. W. Williams, of Frace, near Camborne, Cornwall.
MANAGING CLERK AT THE MINES—Mr. J. C. Goodman.

BANKERS.
LONDON—Messrs. Glyn, Harries, and Co., Lombard-street.
WALES—Messrs. Jones and Williams, Dolgelly, Merionethshire.

SOLICITORS.
LONDON—W. W. Fisher, Esq., 3, King-street, Cheap-side; and Messrs. Wynne Williams, and Macleod, Temple.

WALES—Messrs. Owen and Griffiths, Dolgelly, Merionethshire.

ANALYTICAL CHEMIST—Dr. Andrew Ure, F.R.S., F.S.A., Charlotte-street, Bedford-square.

PURSES AND SECRETARY IN LONDON—W. T. Griffiths, Esq.

The mines proposed to be worked by this company extend under a surface of above 1000 acres, and are situated in the neighbourhood of Dolgelly, in the county of Merioneth.

Prospectuses and every information can be obtained at the offices of the company, 2, New Broad-street, City, where specimens of the ores, and original assays by some of the principal miners of the present day, as well as the manuscript reports of several eminent mining captains, may be inspected.

Application for shares to be made to the purser, at the offices of the company, the solicitors, and the following brokers and agents:—Mr. B. Rankin, stockbroker, 23, Tottenham-court-yard; Messrs. Watson and Cull, mining agents and stockbrokers, St. Michael's-alley, Cornhill; and Mr. C. W. De Bernardy, 46, Leicester-square, London; Messrs. T. Cardwell, and Sons, and Mr. J. Fennell, Manchester; Mr. P. Kempson, stockbroker, Birmingham; Mr. C. S. Edall, Turin; Mr. J. Cunningham, Junr., Bristol; Mr. T. A. Martin, Swansea, South Wales; and Mr. J. Russell, Exchange-street, Liverpool; Messrs. C. Wellbeloved, and Co., Leeds; and Capt. W. Williams, near Crown, Cornwall.

Copies of the prospectus can also be had at the offices of Mr. H. English, mining engineer, 35, Fleet-street; and at the Mining Journal, 26, Fleet-street, London.

IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their IMPROVED PATENT ELASTIC METALLIC PISTONS.

The PRINCIPAL FEATURE AND ADVANTAGE OF THIS IMPROVEMENT is

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Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PISTON yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

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PATENT LUBRICATING FLUID (OF ANIMAL OIL) FOR ALL DESCRIPTIONS
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W. B. & CO. have the pleasure to state, that the above article is extensively used in Her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

Further particulars can be had, and testimonials seen, by application to the manufacturers, W. BROTHERTON & CO., Hungerford Wharf, Strand, London.

N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil.

IMPORTANT TO RAILWAY COMPANIES.

PATENT KAMPTULICON COMPANY, 18, CORNHILL.

This company having completed their new factory, are prepared to supply railway managers and contractors with a elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and consequently, wear and tear. The elastic plank is strongly recommended to be used for the heels and sides of carriages, to prevent splinters when accidents occur.

By order of the board, F. G. GREVILLE, Secretary.

NORTH WALES ADVENTURE. SNOWDON AND DALAWIN COPPER MINES.

In 800 shares, of £10 each.

THE SETTS on which these two promising MINES are situated, are in the county of CARNARVON, and are held under leases from the Hon. Colonel Fennant and the Hon. E. Dalkeith, for 31 years (about 14 of which are unexpired), at the moderate dues of, for Dalawin 1-10th, and for Snowdon 1-10th, with water-course included, and all other mineral rights reserved to the lessees.

The acts extend over a considerable extent of mineral ground, from which large returns of copper have been made. The whole of the lodes comprised in the Snowdon district are six in number, and in the Dalawin district three have been opened on; both mines are in a state of great activity, and regular returns of copper—upwards of £10,000 value, of which has been disposed of.

The engine-shaft at Dalawin Mine has been sunk 30 fathoms below the adit level, and a level driven upwards of 20 fathoms on the course of the vein, from which large quantities of copper have been obtained. The vein is still going down through the whole length of the level, and the present working is half a yard wide, producing (from the mine) ore at 13 to 15 per cent. A 36-inch water-wheel, with pump, grinder, dressing machinery, and many buildings, have lately been erected at considerable expense, and are fully capable of grinding and preparing for market a large quantity.

The Snowdon Mine is worked by six levels driven on the vein—two only of these are at present worked, and producing good returns; the ends of these levels are still rich in ore, and it is proposed to connect these by shafts, so as to afford an opportunity of working the whole by means of stopes, by which a considerable quantity of ore would be obtained at a small cost (the expense of sinking these shafts would be paid by the ore obtained in sinking the same); the water from the mine passes off by these levels, thereby rendering the expense of pumping unnecessary. A 40-inch water-wheel, with two sets of grinders, dressing machinery, and stamp-heads, have been erected, and a large expense has been incurred in forming a road to the grinding-house, so as to remove the difficulty of transit from this long-neglected, but valuable, mine.

The present proprietors—being only two in number—are anxious to work the mines in a more effectual manner, and upon a more extended scale—having hitherto confined their operations to only one lode in each mine. They are, consequently, induced to offer ONE-HALF INTEREST in the public upon terms which, considering the importance of the sets, and the richness of the present lode, must be deemed exceedingly reasonable. It is proposed to divide the mines into 300 shares, and to dispose of 150, at £10 per share—the present proprietors keeping the 150 shares. The concern is managed and conducted altogether on the Cost-book System.

For shares, and further particulars, apply to Crossman, Sommers, and Co., agents, "Original Registry Office for the Purchase and Sale of Mining Shares," No. 28, Threadneedle-street, London.

ELBOROUGH SILVER-LEAD, CALAMINE, AND BARYTES MINE.—PROSPECTUS.

THIS MINE is situated in the parish of HUTTON, Somerset, within four miles of Weston-Super-Mare, and Uphill Quay, and 2½ miles of the Banwell station, on the Great Western Railway, is divided into 256 shares, and managed on the Cost-book System. The set, which comprises 800 fathoms in length and 400 fathoms in width, contains a great number of lodes, which have proved very productive as far as they have been wrought.

It is well-known that for centuries past large quantities of lead ore have been raised by the system of gridding, a rude sort of mining of the district, and parties so working, obtained large profits, although paying at the rate of 1-5th and even 1-4th to the land, as dues or royalty. But, although this set has been a very productive one, even by the rude operations of the gridders on the backs of the lodes, and within a few fathoms of the surface, yet for want of more mining experience nothing has been done effectually in proving the lodes; traces of the gridders' operations are visible for several hundred fathoms in length, and the rubbish, or waste deposits thereon, on the surface, sufficiently indicate that large returns may be expected, if these mines are properly worked.

The other is a lode from which several tons of lead have been raised by the present company, from the old workings, which on this lode have been prosecuted by the gridders, 20 fathoms, leaving a course of lead now in the bottom, but having been wrought in such a zig-zag manner they are unfit for the purpose of mining advantageously; this shaft is, therefore, being sunk east of these workings in whole ground.

It is the general opinion of miners acquainted with the locality, that this mine can be prosecuted to the depth of 100 fathoms, without the aid of a single pumping-engine; and this, with other advantages connected with the concern, justify the proprietors in stating that in their opinion the outlay of a comparatively small capital will bring the mine into a profitable state of working.

REPORTS.

TO MR. R. VIVIAN, TUCKINGMILL, CAMBORNE, CORNWALL.

SIR,—I have been a resident in this part for the last eight years, and have traversed this mineral country from the Bristol river to Wells, which is about 30 miles north and south, and from Bath to Bridgwater river, which is about 40 miles east and west, and, in so doing, carefully observing the geological and mineralogical position of those localities, and finding they are composed of mineral or mountain limestone, old red sandstone, new red sandstone, lias, peat, magnesian limestone, and conglomerated limestone, quartz, fluor-spar, silica, and Jasper; there are hundreds of lodes and veins in this range, which carry metallic and mineral ores, such as lead, iron, copper, manganese, calamine, barytes, pyrites, red oxide, antimony, coal, yellow ochre, and white lead ore.

Having heard that there were some of my countrymen at Elborough, near Banwell, working a mine, I went to see them on Tuesday, and found Capt. Trevithick and his party dressed in lead and calamine; Capt. Trevithick asked me to walk around the mine with him; I went underground at Vivian's shaft, and saw Vivian's lode, 17 fathoms deep, nearly perpendicular—a very kindly lode, 2½ ft. big, composed of flookan, silica, and lead—good saving work. At Chapman's shaft a strong lode, and very kindly north lode: there are several lodes south of Vivian's lode, and underlying north, which I think are likely to drop in and improve this lode in depth. I think this altogether a very promising mine.

It is in the mountain limestone that this mine is, and it is in the mountain limestone that the principal lead mines are situated, and they are those of Somersetshire, Derbyshire, Yorkshire, Cumberland, Shropshire, Wiltshire, and Denbighshire—these are the most productive for lead and calamine.

The lead mines in Cornwall and Devon are in primitive rock, so that the Cornish and Devon mines in general know but little about limestone formation.

I think Somerset will make a great mining district, some day. I have an account of a little mine that paid in 1812, £208 15s. 10d. for dues; and take the average, they were no more than 15 fathoms deep, and they rose hundreds of pounds' worth, 8 or 10 fathoms deep—this mine is four miles east of Elborough Mine.

I am, Sir, yours &c. THOMAS ROBERTS.

Osland's Cottage, Wington, near Bristol, Somerset, May 6.

SIR,—In compliance with your wish I herewith hand you a few remarks on the present appearance and future prospects of Elborough Mine.

This mine is situated on Elborough-hill, in the parish of Hutton, and about three miles distance from Banwell station (Great Western Railway), the set extends nearly a mile on the course of the lodes (eight or nine in number), nearly the whole of which have been worked on the backs, by the old men, and from the appearance of the work done, great quantities of lead have been raised.

I find your operations are at present confined to sinking a shaft on the course of Vivian's lode, which appears to be the principal one, and most regular in its course, nearly perpendicular, its longitudinal direction is about 10° south of east; this shaft is sunk 18½ fathoms from surface, at which point the lode is 2 feet wide, composed principally of light-colored flookan, spar, and calamine, impregnated with lead throughout—a very kindly lode indeed; I would strongly recommend you to get down this shaft with all possible speed, bearing in mind the fact, that the south of this shaft, dipping towards the lode you are now sinking, should they retain their regular course and underlay, you will have the junction of these lodes in the shaft, within the depth of 60 fathoms; when down about 16 fathoms from surface with this shaft, they cut into a large cavern, which has been made into good whin pit—here an end was begun, driving east of shaft, where the lode is at present small—composed of flookan, spar, and lead, I would also recommend you to place four men in this end, as it is my opinion that the whole of the lodes in this part approximate, and form a junction between 20 and 30 fathoms further east than you are at this being done—you will fairly prove this part of the mine; from the favourable state of the ground, a great quantity can be developed in a short time; should it continue as it now is, the cost for driving or sinking will not exceed 60s. per fathom.

On Chapman's works the lode has been laid open about six fathoms deep, where it is 3 feet wide, composed of barytes, calamine, and beautiful spar, intermixed with lead—a very promising lode.

Further north still, about 60 fathoms, there is a parallel lode with the one last mentioned; this lode has been wrought on 14 fathoms deep, where it is 2 feet wide—composed of barytes and lead; Capt. Trevithick informs me the returns from this place have been equal to the outlay; these works are for the present suspended.

Before I conclude, I beg to observe, that it is my opinion, from the congenial state in which the lodes are imbedded, and the promising appearance of the lodes at this shallow depth, that you will at no distant period have a profitable concern.

I remain, Sir, your obedient servant.

Mendip Hills Mines, May 6, 1847. F. C. HARPER.

(A report from the mine, dated 7th inst., is inserted among our Mining Correspondence.)

WHEAT PORTLEDGE COPPER AND SILVER-LEAD MINE COMPANY.

ON THE COST-BOOK SYSTEM.

In 4000 shares.

BANKERS—Messrs. Harding, Brington, and Co., Bideford.

SECRETARY—Mr. John How, junr., Bideford.

THIS MINE is situated on the sea-coast, in the parish of ALWINGTON, about 4 miles west of the town of BIDEFORD, in the county of DEVON, and from the rich specimens of minerals already produced, this fair to be a most profitable undertaking. The set extends 1000 feet of the property of the gentleman, from whom a lease of 21 years, from the 19th of April, 1847, has been obtained, at a royalty or dues of 1-16th of the produce.

Advantages present themselves for working this mine, which rarely occur, not only as respects the appearance of the lodes, but also from the facility afforded for working it at a considerable depth without the aid of expensive machinery, as well as its being in the immediate vicinity of an excellent place for shipment.

The cliffs rising from the sea-coast, and in which the minerals are found, are sufficiently high to admit of driving an adit level on the course of the lode, about 50 fathoms below the surface of the land, thereby rendering the expense of steam or other power to clear the water from the mine to that depth unnecessary.

Specimens of copper ore taken from the mine have been assayed by two different public assayers, who have given the same result of produce—namely, 14½ per cent. Specimens of silver-lead ore have also been raised, the value of which is not yet ascertained.

In the formation of the present company the lease proposes to admit coventurers with himself on equal and equitable terms in all the advantages which the mine offers; he, therefore, proposes to divide the mine into 4000 shares, reserving 1000 to himself, upon which he will pay equally with the other adventurers.

£1 is per share will be required to be paid on the transfer of the shares; £1 per share to go to the lessee, and 1s. per share to be applied to the working of the mine. Future calls, if required, to be made at 1s. per share, at intervals of not less than three months; but from the great advantages afforded for working the mine, and the rich specimens of ore already raised, as well as the general formation and appearance of the lodes and strata, it is confidently believed that more than the first deposit of 1s. per share will be required to be expended in working the mine, before sufficient ore will be raised to pay the cost, and leave a dividend for the shareholders.

A committee of management will be chosen out of the shareholders at the first general meeting. No shareholder will be liable for any amount above the number of shares he holds. Applications for shares, or other particulars, to be made to the secretary.

BIRMINGHAM AND OXFORD JUNCTION RAILWAY.

THIRD CALL OF FIVE POUNDS PER SHARE.

The directors having passed a resolution, requiring the shareholders to pay a further CALL of FIVE POUNDS on each and every share held by them respectively, on the 30th day of August, 1847.—Notice is hereby given, that the shareholders are required to PAY such call on the day appointed, to one of the under-mentioned bankers; and in default thereof, they will be charged with interest, at the rate of 5 per cent. per annum, from that date until the said call is actually paid:—

The Birmingham Banking Company, Birmingham.
Messrs. Attwoods, Spooner, and Co., do. do.
Or at their London Agents:

Messrs. Jones Lloyd and Co., for the Birmingham Banking Company.
Messrs. Spooner, Attwood, and Co., for Messrs. Attwoods and Co.; and at
Messrs. Moss and Co., Liverpool, for the Birmingham Banking Company.

A circular will be sent to each shareholder, which must be deposited at the bankers when the call is paid. By order of the board of directors,
JOHN WM. KIRKSHAW, Secretary.

34, Bonnet's-hill, Birmingham, June 12, 1847.

CALEDONIAN RAILWAY.—LOANS ON DEBENTURES.

THE CALEDONIAN RAILWAY COMPANY are prepared to RECEIVE TENDERS OF LOANS ON DEBENTURES, in sums of not less than £500, for three or five years, bearing interest at the rate of 5 per cent. per annum, payable half-yearly, in Edinburgh, Glasgow, London, Liverpool, Manchester, or Bristol.

Tenders to be addressed to this office.—Parties may also communicate personally with Messrs. Foster and Braithwaite, 68, Old Broad-street, London.

By order of the directors, D. HANKINE, Treasurer.
Caledonian Railway Office, 122, Princes-street, Edinburgh, March 26, 1847.

LONDON, BRIGHTON, AND SOUTH COAST RAILWAY.

ENGINES AND ENGINE-HOUSES TO BE LET OR SOLD.

The directors will be ready, on the 14th of August, to RECEIVE APPLICATIONS TO RENT, OR PURCHASE, THE ENGINES, ENGINE-HOUSES, WATER-TANKS, RESERVOIRS, &c.

ATMOSPHERIC STOCK FOR SALE.

ONE PAIR OF CONDENSING ENGINES, of 50-horse power each, with air cylinders, 37 inches diameter, 2½ feet stroke, made by Messrs. Maudslay, Field, and Co., now fixed at Croydon.

ONE PAIR of ditto ditto, at Forest-hill.

ONE PAIR of ditto ditto ditto.

Each pair of the above engines is furnished with three Cornish boilers.

FOUR THOUSAND TO FIVE THOUSAND TONS OF CAST-IRON ATMOSPHERIC TUBES, 15 inch diameter pipes and valve boxes.

Also, the same length of WROUGHT-IRON RODS, 1-inch diameter, together with a quantity of BOLTS, SCREWS, &c., to complete the same ready for fixing.

Parties desirous of purchasing all, or any portion of the above, are requested to send in sealed tenders, marked "Tenders for Atmospheric Apparatus," under cover, addressed to the secretary, on or before Saturday, the 14th August next.

Purchasers of any part of the above may have the same delivered by the company at New Cross or Croydon; but parties purchasing the engines for removal, will have to take them down, and load them on the company's trucks.

Further particulars may be known on application to Mr. R. J. Hood, engineer, Brighton, London Terrace, July 8, 1847. By order, T. J. BUCKTON, Secretary.

MANCHESTER, SHEFFIELD, AND LINCOLNSHIRE RAILWAY.—GREAT GRIMSBY AND SHEFFIELD JUNCTION RAILWAY.

TO CONTRACTORS.

The directors are prepared to LET THE ERECTION AND COMPLETION OF THE various STATIONS on the portion of LINE extending from GREAT GRIMSBY to NEW HOLLAND, and to LINCOLN.

Further information may be obtained at Mr. Fowler's Office, in London, at No. 10, Abingdon-street; or in Sheffield, at St. James-street, where plans and specifications may be seen, on and after the 21st inst.; and the directors will be ready to receive tenders, on Tuesday, the 30th, at Twelve o'clock, to RECEIVE THE TENDERS, and let the works.

The directors do not bind themselves to accept the lowest tender.
13, Abingdon-street, Westminster, July 9, 1847. YARBOROUGH, Chairman.

MANCHESTER, SHEFFIELD, AND LINCOLNSHIRE RAILWAY.—NEW HOLLAND AND HULL FERRY.

TO STEAM-BOAT COMPANIES AND OTHERS.

The directors are prepared to LET THE WORKING OF THE FERRY between NEW HOLLAND and HULL.

Further information may be obtained, and specifications seen at Mr. Fowler's Office, 13, Abingdon-street, Westminster, on and after Monday, the 19th inst.

The directors will meet at Great Grimsby, at Twelve o'clock on Wednesday, the 29th, to RECEIVE THE TENDERS.

The directors do not bind themselves to accept the lowest tender.
13, Abingdon-street, Westminster, July 9, 1847. YARBOROUGH, Chairman.

NEWCASTLE AND BERWICK RAILWAY.—OPENING OF THE LINE THROUGHOUT BETWEEN NEWCASTLE AND BERWICK.

On and after THURSDAY, the 1st July, the LINE will be OPEN THROUGHOUT FOR PAS